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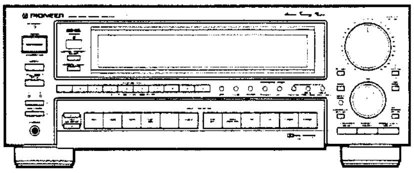
The future of sound and vision.

Service Manual



ORDER NO.
ARP2094

AUDIO/VIDEO STEREO RECEIVER

VSX-D1S

MODEL VSX-D1S HAS FOLLOWING VERSIONS :

Type	Power requirement	Export destination
KUC	AC120V only	U.S.A. and Canada
SD	AC110V, 120-127V, 220V, 240V (switchable)	Kingdom of Saudi Arabia and General market

- **This manual is applicable to the VSX-D1S/KUC and SD types.**

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This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

1. SAFETY INFORMATION

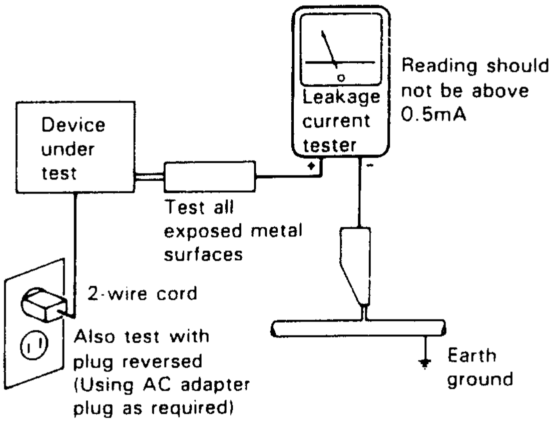
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
Device under test
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

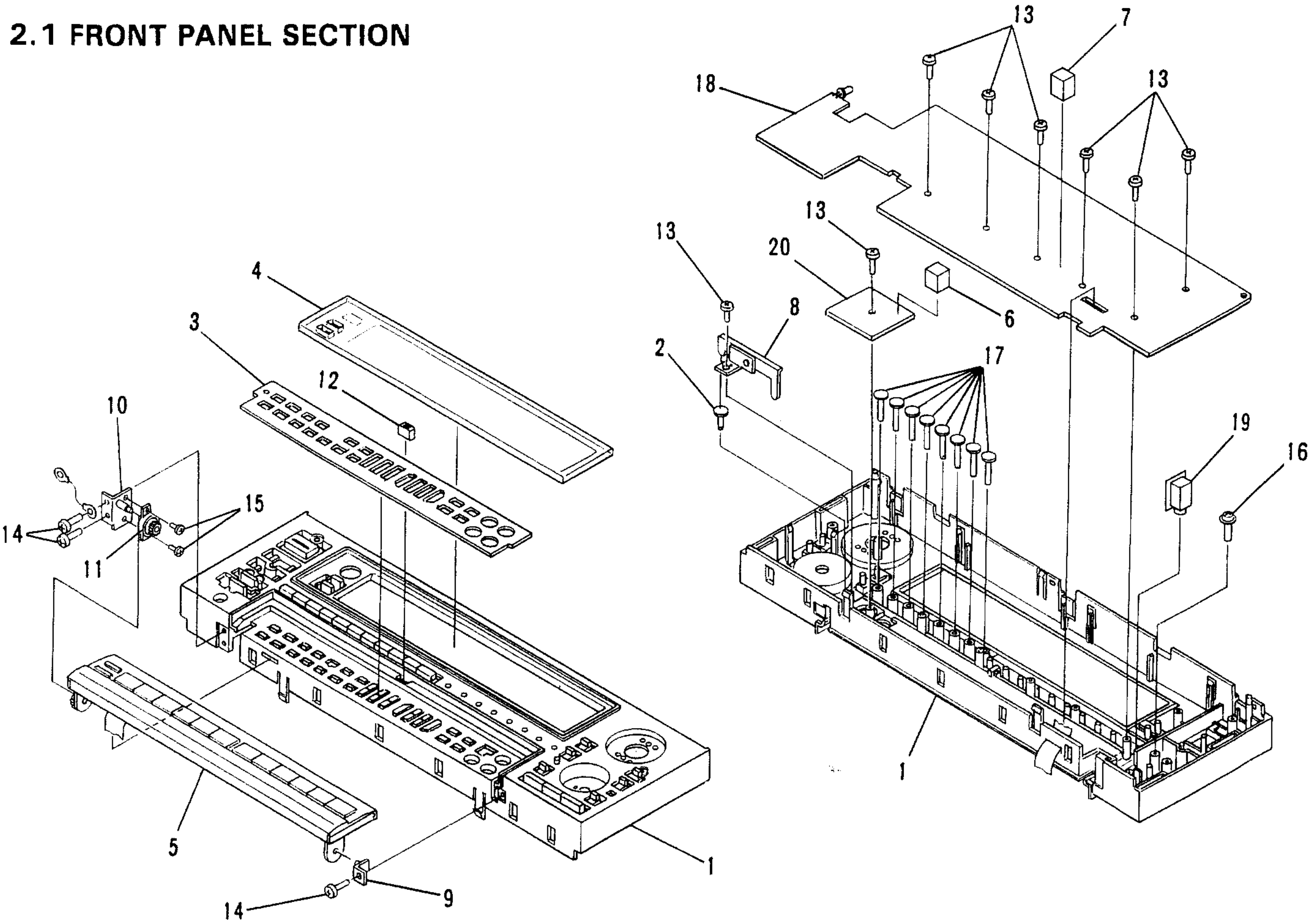
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

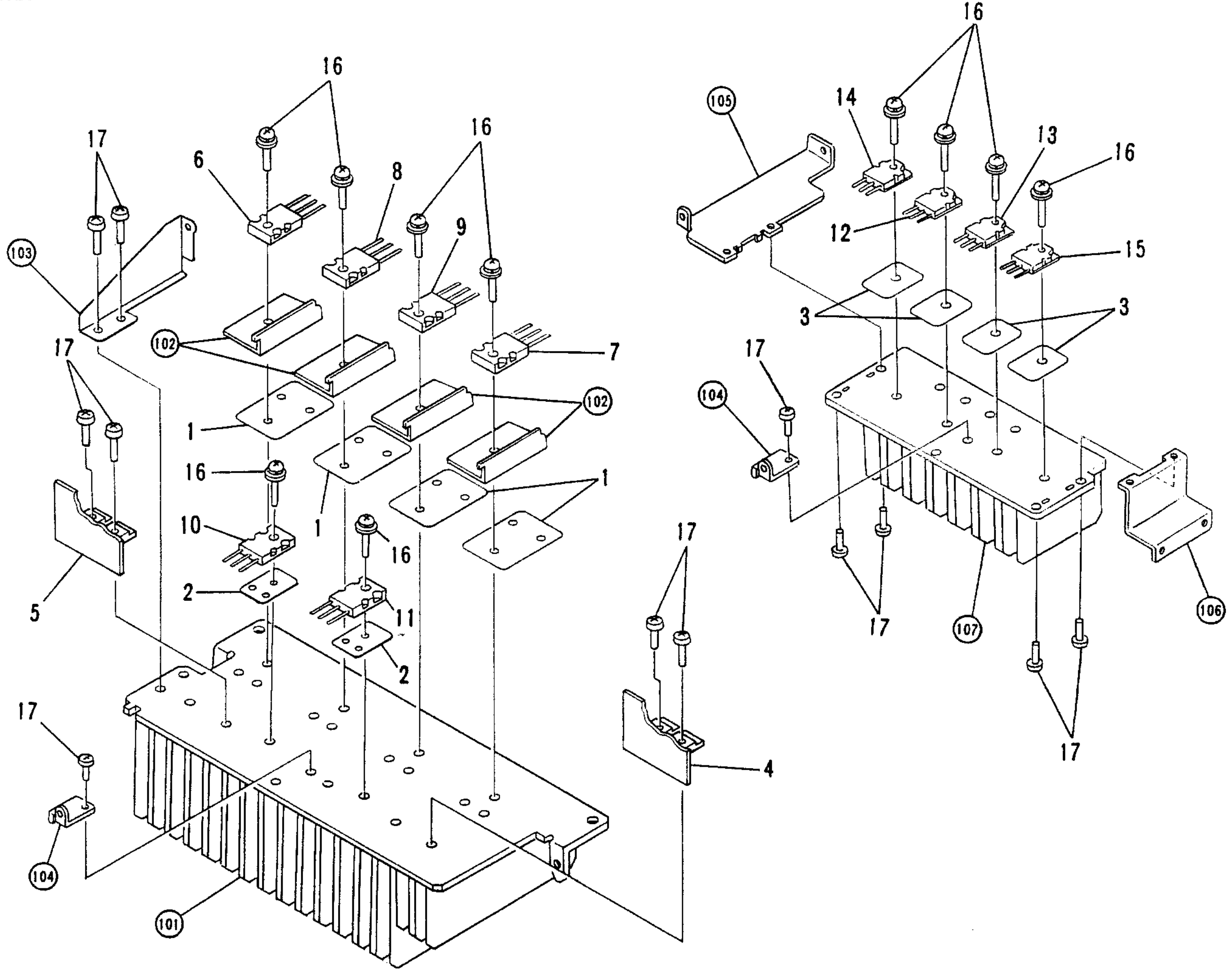
2.1 FRONT PANEL SECTION



Parts list of Front panel section

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	BASE	AMB1701		11	DAMPER	AXA1009
	2	TACT KNOB	AAD1834		12	MAGNET	AXX1016
	3	PANEL (PVC)	AAK1989		13	SCREW	BBZ26P080FMC
	4	FRONT ACRYL	AAK1990		14	SCREW	BBZ30P080FZK
	5	DOOR ASS'Y	AAN1220		15	SCREW	PBZ20P040FZK
	6	CUSHION RUBBER	AEB1141		16	PWB SCREW	ABA1085
	7	CUSHION RUBBER	AEB1142		17	KNOB (GOLD)	AAD1822
	8	EJECT ASS'Y	AWL1050		18	FRONT CONTROL ASS'Y	AWZ2828
	9	BEARING ASSY L	AWL1051		19	HEAD PHONE ASS'Y	AWZ2838
	10	BEARING ASSY R	AWL1052		20	FRONT VIDEO ASS'Y	AWZ2854

2.2 HEAT SINK SECTION


16
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104
101
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4
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14
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13
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12
15
3
3
17
104
17
107
106
17

Parts list of Heat sink section

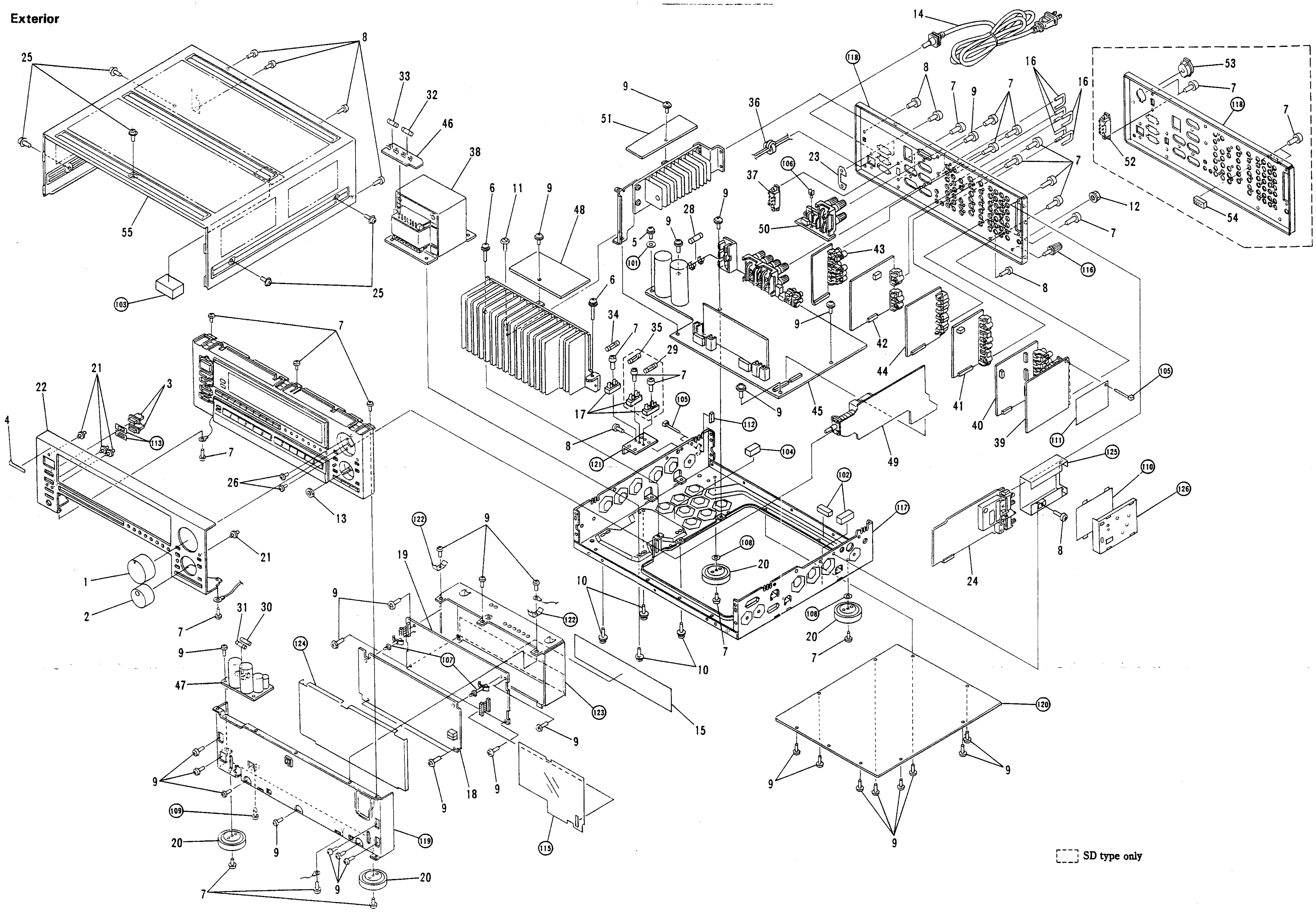
Mark	No.	Description	Parts No.
	1	MICA SHEET	AEE1033
	2	INSULATING SPACER	AEP−313
	3	MICA SHEET	AEC1143
	4	POWER SUPPLY 1 ASS'Y	AWZ2853
	5	POWER SUPPLY 2 ASS'Y	AWZ3052
⚠	6	TRANSISTOR (Q1)	2SC3281
⚠	7	TRANSISTOR (Q2)	2SC3281
⚠	8	TRANSISTOR (Q3)	2SA1302
⚠	9	TRANSISTOR (Q4)	2SA1302
⚠	10	TRANSISTOR (Q5)	2SA1302
⚠	11	TRANSISTOR (Q6)	2SC3281
⚠	12	TRANSISTOR (Q9)	2SA1264N
⚠	13	TRANSISTOR (Q8)	2SC3181N
⚠	14	TRANSISTOR (Q7)	2SC3181N
⚠	15	TRANSISTOR (Q10)	2SA1264N
	16	SCREW	ABA−297
	17	SCREW	ABA−298
	101	HEAT SINK	
	102	HEAT SINK	
	103	BRACKET	
	104	PCB SUPPORT	
	105	HEAT SINK BRACKET F	
	106	HEAT SINK BRACKET R	
	107	SUB HEAT SINK	

2.3 EXTERIOR

Parts list of Exterior

Mark	No.	Description	Parts No.
	1	MASTER VOL ASSY	AAB1119
	2	KNOB (JOG)	AAB1174
	3	KNOB	AAD1821
	4	BADGE	AAM1029
	5	SCREW (STEEL)	ABA-283
	6	SCREW (STEEL)	ABA-297
	7	SCREW	ABA-298
	8	SCREW (STEEL)	ABA1009
	9	SCREW (STEEL)	ABA1011
	10	SCREW	ABA1034
	11	SCREW (STEEL)	ABA1050
	12	FLANGE NUT M9	ABN1006
	13	NUT	ABN1016
⚠	14	AC POWER CORD (KUC type)	ADG1072
⚠	14	AC POWER CORD (SD type)	ADG1073
	15	SEAL	AEH1018
	16	PLUG	AKM1061
⚠	17	FUSE HOLDER	AKR-038
	18	DSP • U−COM ASS'Y	AWZ2978
	19	DAC ASS'Y	AWZ2979
	20	FOOT	AMR1159
	21	LENS	AMR2177
	22	FRONT PANEL	ANB1410
	23	AC CORD SPACER	ANG1153
⚠	24	TUNER ASSY	AWE1160
	25	SCREW	FBT40P080FZK
	26	SCREW	VMZ30P060FMC
	27	....	....
⚠	28	FUSE (8A, FU1) (KUC type)	AEK1035
⚠	28	FUSE (5A, FU1) (SD type)	AEK−126
⚠	29	FUSE (5A, FU2) (SD only)	AEK−126
⚠	30	FUSE (6.3A, FU3) (KUC type)	AEK−309
⚠	30	FUSE (6.3A, FU3) (SD type)	AEK−127
⚠	31	FUSE (6.3A, FU4) (KUC type)	AEK−309
⚠	31	FUSE (6.3A, FU4) (SD type)	AEK−127
⚠	32	FUSE (1.25A/125V, FU5)	AEK−120
⚠	33	FUSE (1.25A/125V, FU6)	AEK−120
⚠	34	FUSE (1.25A/125V, FU7)	AEK−120
⚠	35	FUSE (1.25A, FU8) (SD only)	AEK−120
	36	FERRITE CORE	ATX1017
⚠	37	VOLTAGE SELECTOR (S1)	AKX1004
	38	POWER TRANSFORMER (T) (KUC type)	ATS1292
	38	POWER TRANSFORMER (T) (SD type)	ATS1293
	39	MAIN FUNCTION ASS'Y	AWZ2830
	40	SUB FUNCTION ASS'Y	AWZ2831
	41	VIDEO FUNCTION ASS'Y	AWZ2832
	42	ENHANCER • ADP ASS'Y	AWZ2833
	43	TERMINAL ASS'Y	AWZ2835
	44	S. VIDEO ASS'Y	AWZ2852
	45	POWER SUPPLY & U−COM ASS'Y	AWZ2827
	46	TRANS TERMINAL ASS'Y	AWZ2893
	47	POWER SUPPLY & CAPACITOR ASS'Y	AWZ2894
	48	CENTER AMP ASS'Y	AWZ2829
	49	MOTOR VOLUME ASS'Y	AWZ2834
	50	R. C. SPEAKER ASS'Y	AWZ2836
	51	REAR AMP ASS'Y	AWZ2837
	52	VOLTAGE SELECTOR (S2) (SD only)	AKX1004
	53	VOLTAGE SELECTOR (S3) (SD only)	AKX−507
	54	SLIDE SWITCH (S4) (SD only)	ASH−004
	55	BONNET COVER	ANE1261
	101	SPACER RING	
	102	SPACER RUBBER	
	103	CUSHION (RUBBER)	
	104	SPACER RUBBER	
	105	NYLON BINDER	
	106	MINI CLAMP	
	107	PCB SPACER	
	108	LEG SPACER	
	109	SPACER	
	110	SHEET B	
	111	SHEET C	
	112	LEAD WIRE CUSHION	
	113	SHADING SHEET	
	114	....	
	115	SHEET A	
	116	TERMINAL SCREW	
	117	CHASSIS	
	118	REAR PANEL	
	119	PANEL STAY	
	120	BOTTOM PLATE	
	121	FUSE HOLDER BRACKET	
	122	GROUND PLATE	
	123	DSP CASE	
	124	DSP COVER	
	125	TUNER CASE	
	126	TUNER COVER	

Exterior



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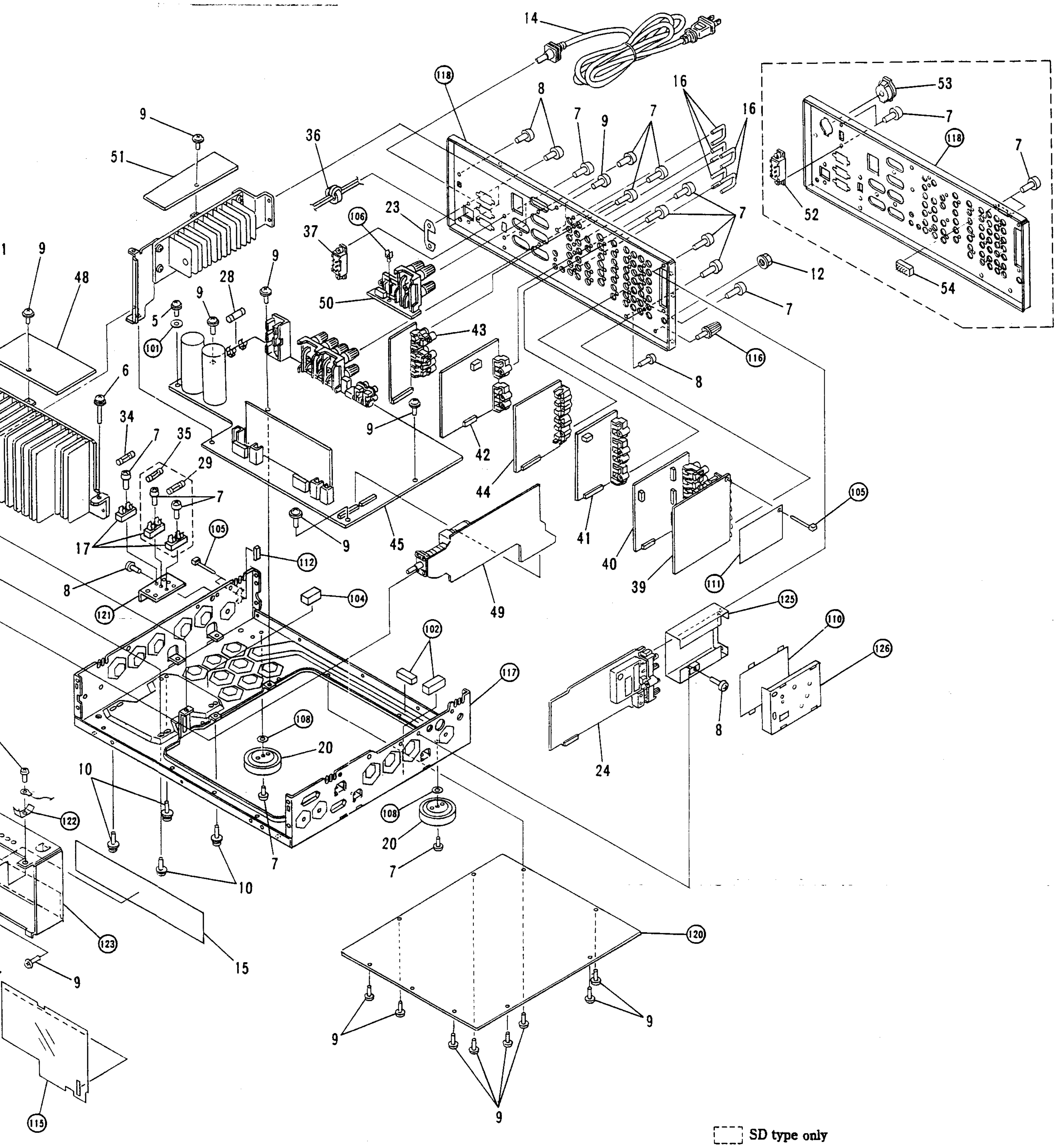
119
SD type only

2.4 F

Parts

Mark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118
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101
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116
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105
111
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121
112
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125
110
126
102
117
108
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24
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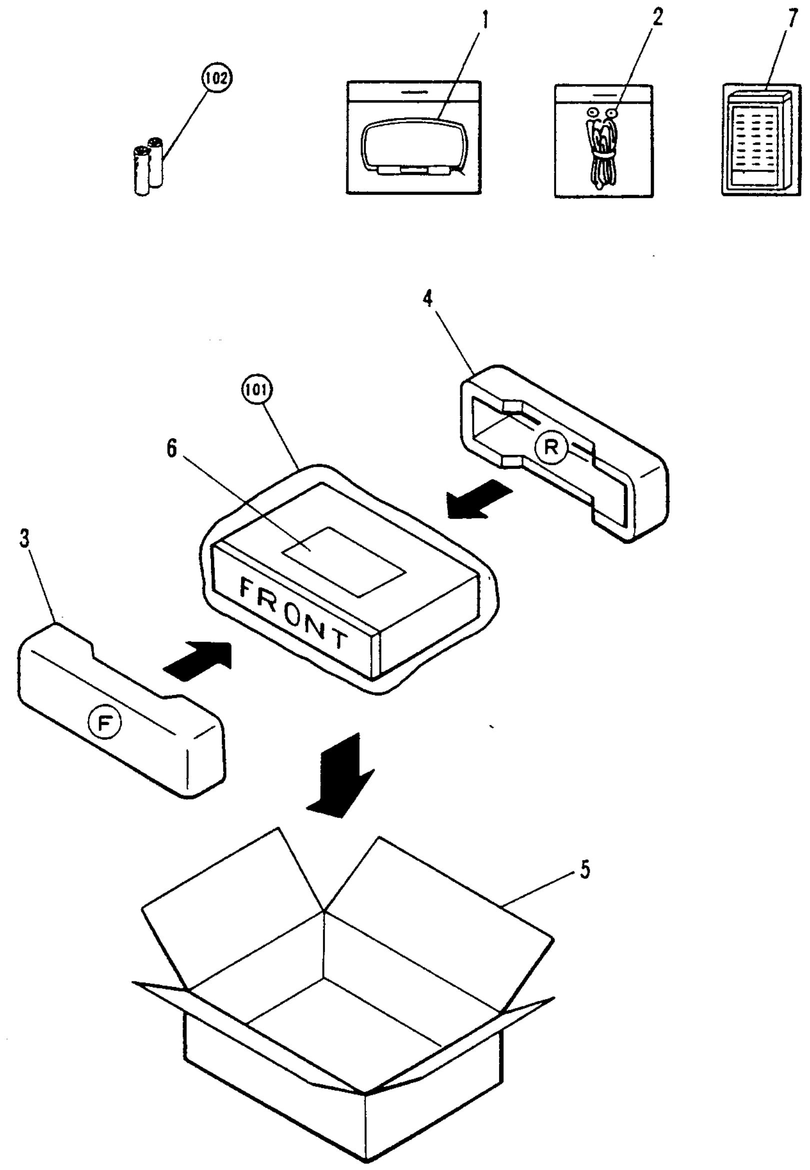
10
122
108
20
7
10
7
123
15
9
120
9
9
9
115

SD type only

2.4 PACKING

Parts list of packing

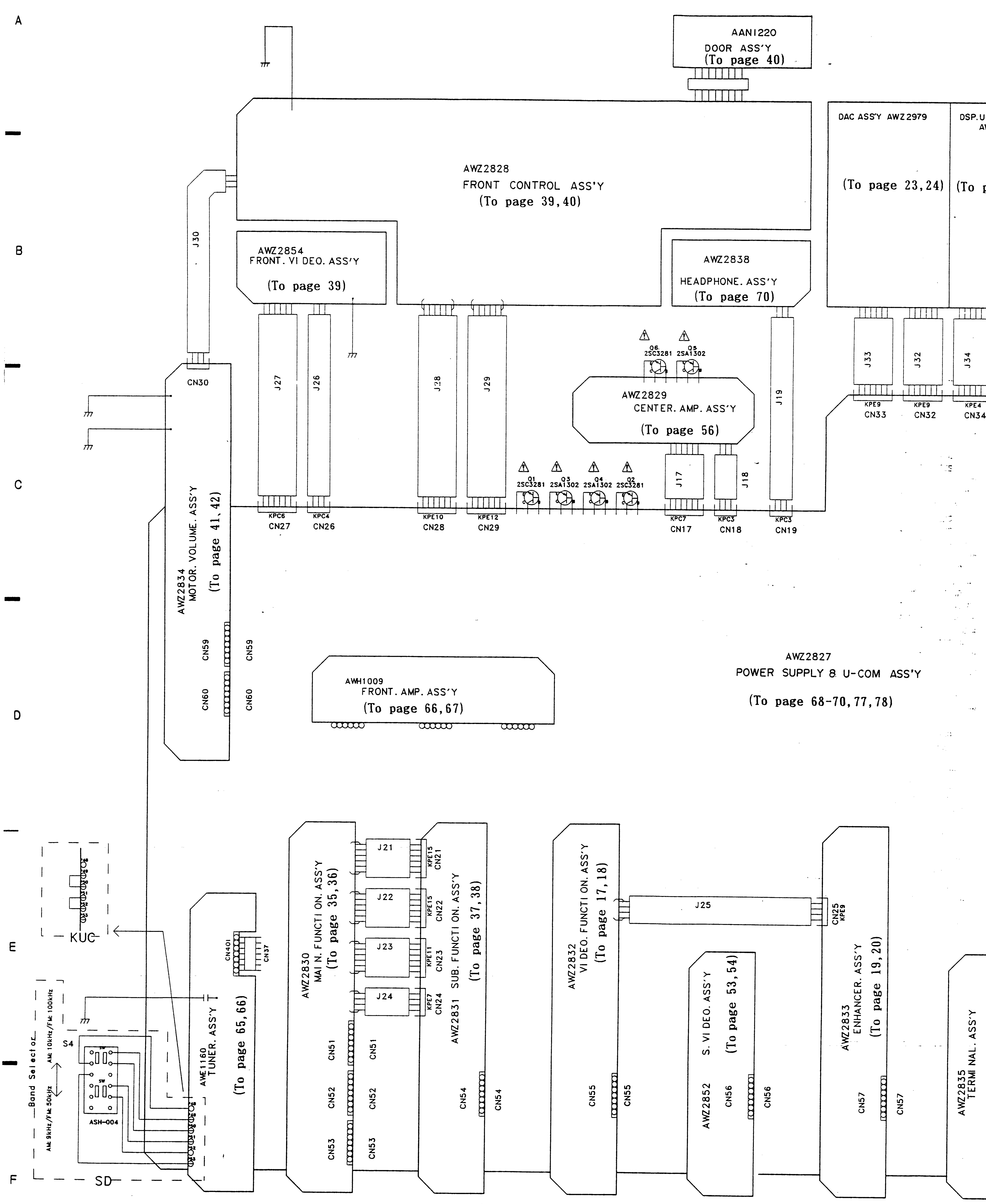
Mark	No.	Description	Parts No.
	1	LOOP ANTENNA	ATB1005
	2	FM ANTENNA	ADH1004
	3	FRONT PAD	AHA1351
	4	REAR PAD	AHA1352
	5	PACKING CASE	AHD1905
	6	INSTRUCTION MANUAL	ARB1272
	7	REMOTE CONSOLE UNIT	AXD1167
	101	PACKING SHEET	
	102	AM4 BATTERY(1.5V)	


102
1
2
7
4
101
6
R
FRONT
3
F
5

3. SCHEMATIC AND P.C.BOARDS CONNECTION DIAGRAM

3.1 OVER ALL SCHEMATIC DIAGRAM

Note ; Refer to pages 104 and 105 of IC INFORMATION for IC BLOCK DIAGRAM in the circuit diagrams.


AAN1220
DOOR ASS'Y
(To page 40)
AWZ2828
FRONT CONTROL ASS'Y
(To page 39,40)
DAC ASS'Y AWZ2979
(To page 23,24)
DSP.U
(To
J30
CN30
AWZ2854
FRONT. VIDEO. ASS'Y
(To page 39)
AWZ2838
HEADPHONE. ASS'Y
(To page 70)
J27
J26
J28
J29
J19
J33
J32
J34
KPE9
CN33
KPE9
CN32
KPE4
CN34
Q6 2SC3281
Q5 2SA1302
AWZ2829
CENTER. AMP. ASS'Y
(To page 56)
Q1 2SC3281
Q3 2SA1302
Q4 2SA1302
Q2 2SC3281
J17
J18
KPC6
CN27
KPC4
CN26
KPE10
CN28
KPE12
CN29
KPC7
CN17
KPC5
CN18
KPC3
CN19
AWZ2834
MOTOR. VOLUME. ASS'Y
(To page 41,42)
CN59
CN60
AWH1009
FRONT. AMP. ASS'Y
(To page 66,67)
AWZ2827
POWER SUPPLY & U-COM ASS'Y
(To page 68-70,77,78)
KUC
Band Selector
AM: 10kHz/FM: 100kHz
AM: 9kHz/FM: 50kHz
S4
SW
ASH-004
SD
CN401
CN37
AWE1160
TUNER. ASS'Y
(To page 65,66)
AWZ2830
MAIN. FUNCTION. ASS'Y
(To page 35,36)
J21
J22
J23
J24
KPE15
CN21
KPE15
CN22
KPE11
CN23
KPE7
CN24
AWZ2831 SUB. FUNCTION. ASS'Y
(To page 37,38)
CN51
CN52
CN53
CN54
AWZ2832
VIDEO. FUNCTION. ASS'Y
(To page 17,18)
CN55
J25
CN25
KPE9
AWZ2852
S. VIDEO. ASS'Y
(To page 53,54)
CN56
AWZ2833
ENHANCER. ASS'Y
(To page 19,20)
CN57
AWZ2835
TERMINAL. ASS'Y
A
B
C
D
E
F
1
2
3
4

Video Input &Output	1VP-P/75Ω	REC Output	150mV/2.2kΩ
Function Input	150mV/30kΩ	Pre Output	1V/220Ω
Phono Input	2.5mV/47kΩ	Main Input	1V/50kΩ

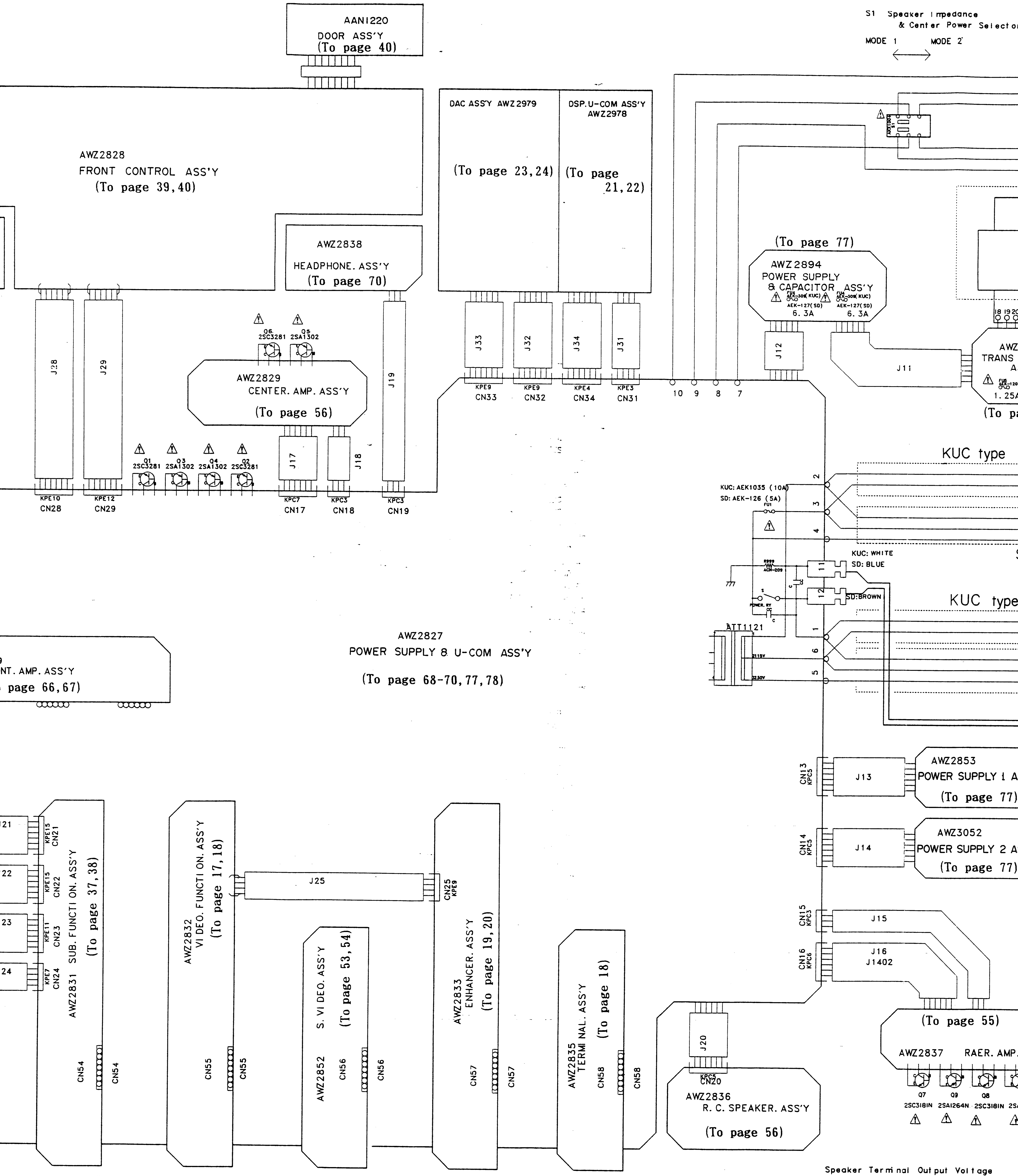
NOTE

1 ⚠ : The mark found on some component parts indicates the importance of the Safty factor
Therefore , when replacing, be sure to use of indentical desingnation.

2 [V] : Signal Voltage at
VH : 130W+130W (Front), 40W (Center), 40W+40W (Rear) 8ohm Out
VL : 70W+70W (Front), 70W (Center), 40W+40W (Rear) 8ohm Out

NNECTION DIAGRAM

ON for IC BLOCK DIAGRAM in the circuit diagrams.


AAN1220
DOOR ASS'Y
(To page 40)
AWZ2828
FRONT CONTROL ASS'Y
(To page 39,40)
DAC ASS'Y AWZ2979
(To page 23,24)
DSP.U-COM ASS'Y AWZ2978
(To page 21,22)
S1 Speaker Impedance & Center Power Selector
MODE 1
MODE 2
AWZ2838
HEADPHONE. ASS'Y
(To page 70)
(To page 77)
AWZ2894
POWER SUPPLY & CAPACITOR ASS'Y
AEK-127(SD) 6.3A
AEK-127(SD) 6.3A
J28
J29
J19
J33
J32
J34
J31
J12
J11
Q6 2SC3281
Q5 2SA1302
AWZ2829
CENTER. AMP. ASS'Y
(To page 56)
KPE9 CN33
KPE9 CN32
KPE4 CN34
KPE3 CN31
10 9 8 7
TRANS
1.25A
(To pa
KUC type
Q1 2SC3281
Q3 2SA1302
Q4 2SA1302
Q2 2SC3281
J17
J18
KPE10 CN28
KPE12 CN29
KPC7 CN17
KPC3 CN18
KPC3 CN19
KUC: AEK1035 (10A)
SD: AEK-126 (5A)
FU1
2 3 4
KUC: WHITE
SD: BLUE
11
12
SD:BROWN
KUC type
ATT1121
1 6 5
AWZ2827
POWER SUPPLY & U-COM ASS'Y
(To page 68-70,77,78)
NT. AMP. ASS'Y
page 66,67)
CN13 KPC5
J13
AWZ2853
POWER SUPPLY 1 A
(To page 77)
CN14 KPC5
J14
AWZ3052
POWER SUPPLY 2 A
(To page 77)
KPE15 CN21
KPE15 CN22
KPE11 CN23
KPE7 CN24
AWZ2831 SUB. FUNCTION. ASS'Y
(To page 37,38)
AWZ2832
VIDEO. FUNCTION. ASS'Y
(To page 17,18)
J25
CN25 KPE9
AWZ2833
ENHANCER. ASS'Y
(To page 19,20)
S. VIDEO. ASS'Y
(To page 53,54)
AWZ2835
TERMINAL. ASS'Y
(To page 18)
CN15 KPC3
J15
CN16 KPC6
J16
J1402
CN54
CN55
AWZ2852
CN56
CN57
CN58
J20
KPC5 CN20
AWZ2836
R. C. SPEAKER. ASS'Y
(To page 56)
(To page 55)
AWZ2837
RAER. AMP.
Q7 2SC3181N
Q9 2SA1264N
Q8 2SC3181N

NOTE

1 ⚠ : The mark found on some component parts indicates the importance of the Safty factor of the part. Therefore , when replacing, be sure to use of indentical designation.

2 [V] : Signal Voltage at VH : 130W+130W (Front), 40W (Center), 40W+40W (Rear) 8ohm Out put
VL : 70W+70W (Front), 70W (Center), 40W+40W (Rear) 8ohm Out put

Speaker Terminal Output Voltage

	S1: MODE1	S1: MODE2
Front	32.2V /8Ω	23.7V /8Ω
Rear	17.9V /8Ω	23.7V /8Ω
Center	17.9V /8Ω	17.9V /8Ω

1. RESISTORS:
Indicated in Ω, ¼W, ⅙W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

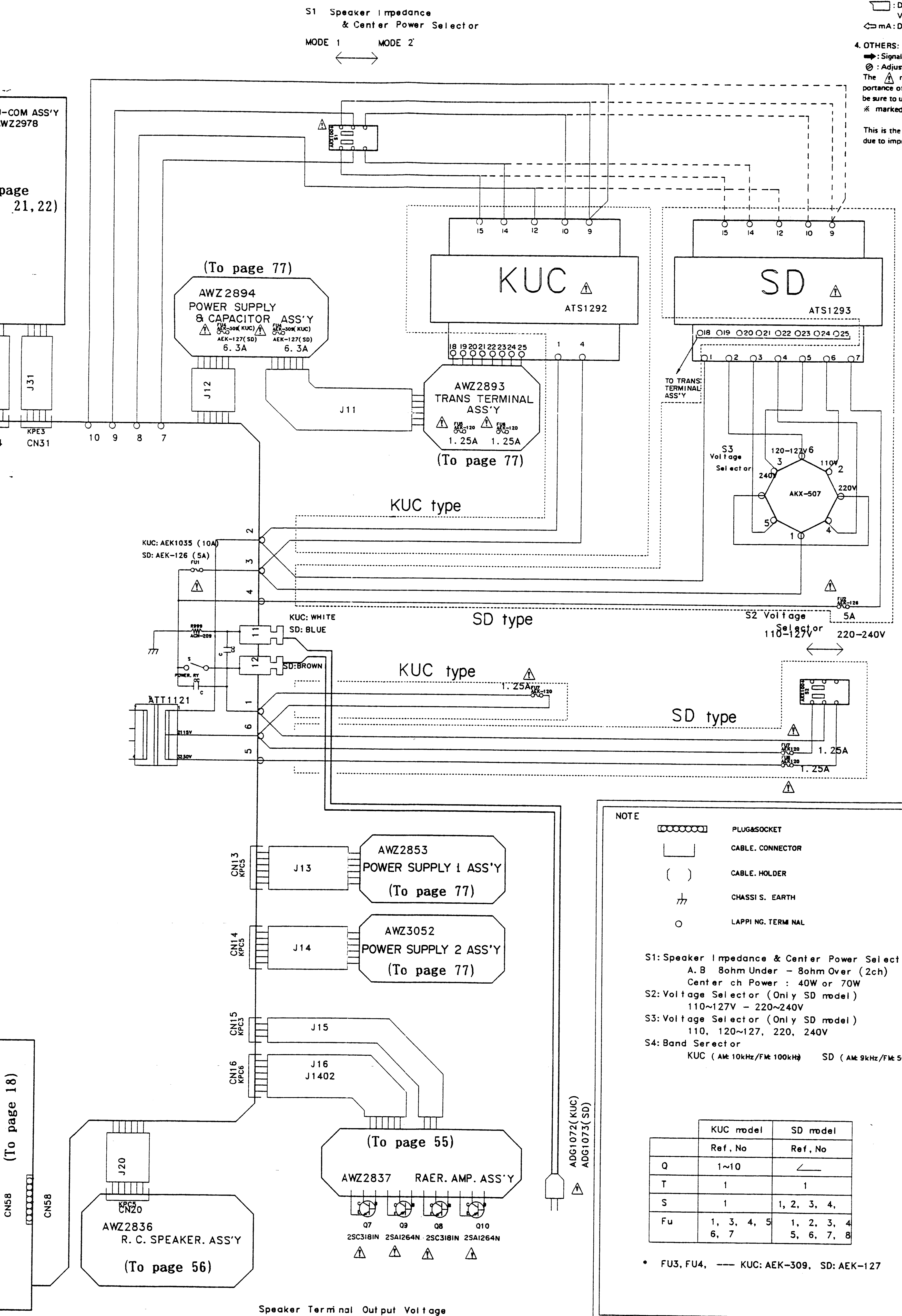
3. VOLTAGE, CURRENT:
▭ : Signal voltage at (W +   W   4 Ω)output (1kHz)
▭ : DC voltage (V) at no input signal
Value in (   ) is DC voltage at rated power.
⇦ mA : DC current at no input signal

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5.SWITCHES
FRONT CONTROL Ass'y

S1901	POWER ON/OFF
S1902	SOURCE DIRECT
S1903	MR.MS
S1904	SP-A
S1905	SP-B
S1906	1
S1907	2
S1908	3
S1909	4
S1910	5
S1911	6
S1912	7
S1913	8
S1914	9
S1915	0
S1916	BAND
S1917	MEMORY
S1918	TONE DOWN
S1919	TONE UP
S1920	AUTO MONO
S1921	DIRECT ACCESS
S1922	NAME
S1923	HITS
S1925	AM FILTER
S1926	SELECTOR
S1927	T.ADP
S1928	FUNC
S1929	TONE
S1930	BASS UP
S1931	BASS DOWN
S1932	MID UP
S1933	MID DOWN
S1934	TRE UP
S1935	TRE DOWN
S1936	BALANCE L
S1937	BALANCE R
S1938	REAR UP
S1939	REAR DOWN
S1940	CENTER UP
S1941	CENTER DOWN
S1942	C MODE
S1943	TEST TONE
S1944	C MONO
S1945	MEMO
S1946	OFF
S1947	JAZZ
S1948	DISCO
S1949	CHURCH
S1950	HALL
S1951	THEATER
S1952	PRO LOGIC
S1953	3CH
S1954	DSSS
S1955	RETURN
S1956	ENH.ON/OFF
S1957	ENH.SEL
S1958	ACO.SEL
S1959	SFM.SEL
S1960	SPL.ON/OFF
S1961	JOG
S1962	MUTE
S1963	M.SELECT
S1964	M.SCAN
S1980	U.RST
S1990	B-A-COM


S1 Speaker Impedance
& Center Power Selector
MODE 1
MODE 2
-COM ASS'Y
WZ2978
page
21, 22)
ADG1003 S1
KUC
ATS1292
SD
ATS1293
15 14 12 10 9
18 19 20 21 22 23 24 25
1 4
(To page 77)
AWZ2894
POWER SUPPLY
& CAPACITOR ASS'Y
FU4 AEK-309(KUC)
AEK-127(SD)
6.3A
6.3A
J12
J11
J31
KPE3
CN31
10 9 8 7
AWZ2893
TRANS TERMINAL
ASS'Y
FU5 AEK-120
FU6 AEK-120
1.25A 1.25A
(To page 77)
TO TRANS TERMINAL ASS'Y
S3 Voltage Selector
120–127V 6
110V 2
240V 3
220V
AKX-507
5 4 1
KUC type
SD type
KUC: AEK1035 (10A)
SD: AEK-126 (5A)
FU1
R999 ACN-209
KUC: WHITE
SD: BLUE
SD: BROWN
POWER, RY
ATT1121
2 3 4 11 12 1 6 5
S2 Voltage Selector
110–127V
220–240V
FU2 AEK-126
5A
1.25A FU3 AEK-120
ADG1004 S2
FU7 AEK120
FU8 AEK120
1.25A
1.25A
CN13 KPC5
J13
AWZ2853
POWER SUPPLY 1 ASS'Y
(To page 77)
CN14 KPC5
J14
AWZ3052
POWER SUPPLY 2 ASS'Y
(To page 77)
CN15 KPC3
J15
CN16 KPC6
J16
J1402
ADG1072(KUC)
ADG1073(SD)
(To page 55)
AWZ2837 RAER. AMP. ASS'Y
Q7 Q9 Q8 Q10
2SC3181N 2SA1264N 2SC3181N 2SA1264N
J20
KPC5
CN20
AWZ2836
R. C. SPEAKER. ASS'Y
(To page 56)
(To page 18)
CN58
CN58

NOTE

▭▭▭▭▭▭▭	PLUG&SOCKET
⊔	CABLE. CONNECTOR
( )	CABLE. HOLDER
⏚	CHASSIS. EARTH
○	LAPPING. TERMINAL

S1: Speaker Impedance & Center Power Selector
A. B 8ohm Under – 8ohm Over (2ch)
Center ch Power : 40W or 70W
S2: Voltage Selector (Only SD model)
110~127V – 220~240V
S3: Voltage Selector (Only SD model)
110, 120~127, 220, 240V
S4: Band Serector
KUC (AM: 10kHz/FM: 100kHz) SD (AM: 9kHz/FM: 50kHz)

	KUC model	SD model
	Ref, No	Ref, No
Q	1~10	∠
T	1	1
S	1	1, 2, 3, 4,
Fu	1, 3, 4, 5 6, 7	1, 2, 3, 4 5, 6, 7, 8

• FU3, FU4, —— KUC: AEK-309, SD: AEK-127

Speaker Terminal Output Voltage

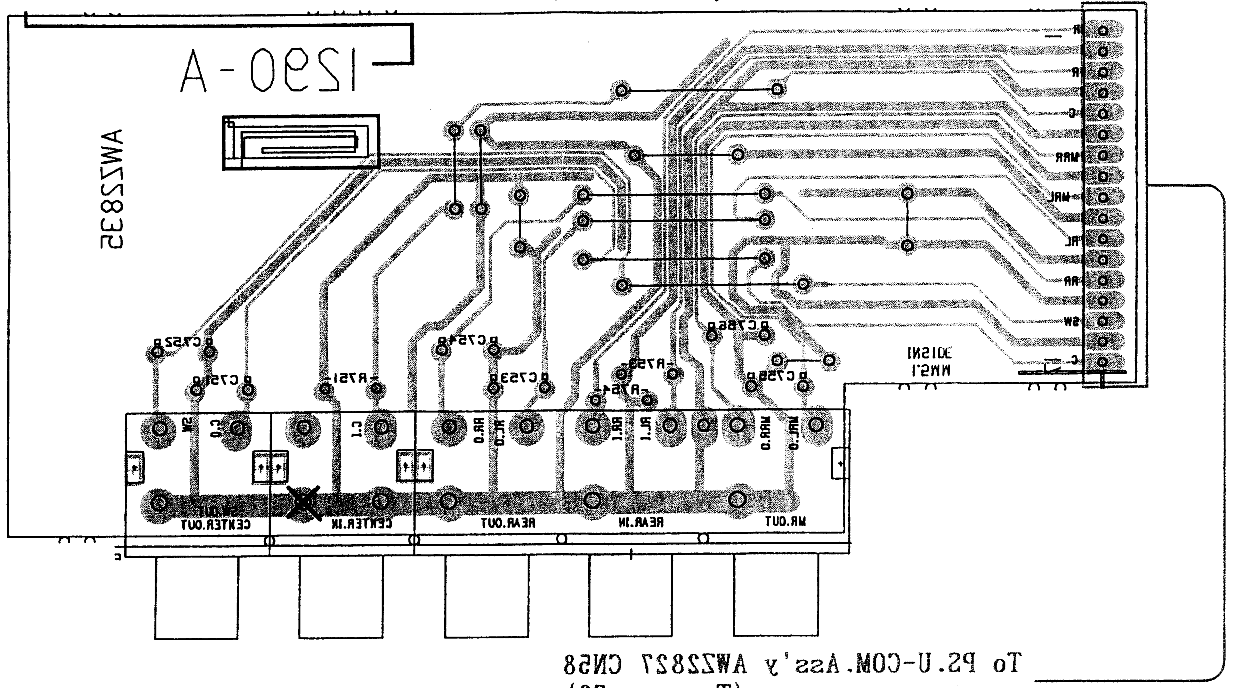
	S1: MODE1	S1: MODE2
Front	32.2V /8Ω	23.7V /8Ω
Rear	17.9V /8Ω	23.7V /8Ω
Center	17.9V /8Ω	17.9V /8Ω

of the part.

put

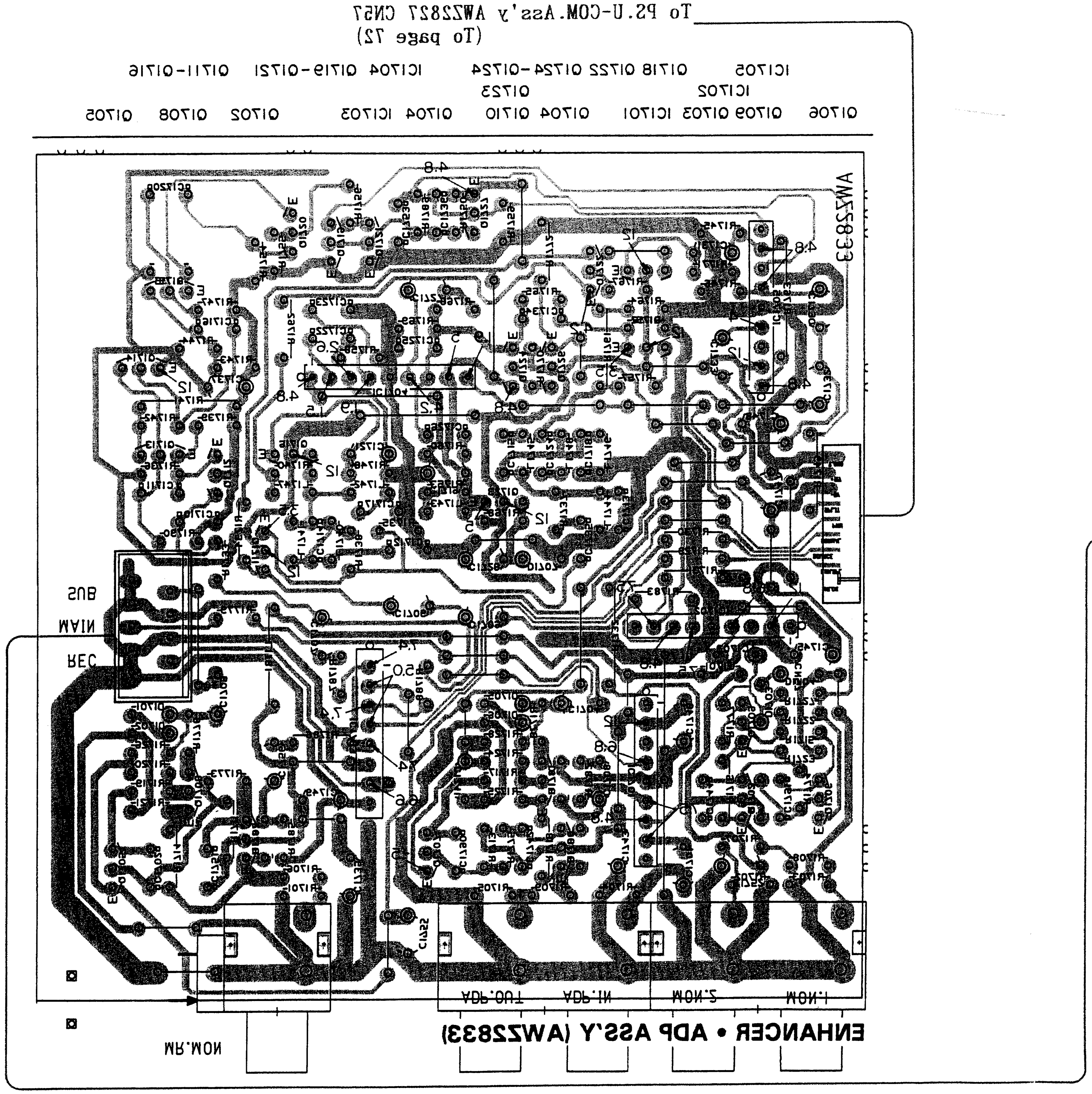
t

This P.C.B. connection diagram is viewed from the foil side.



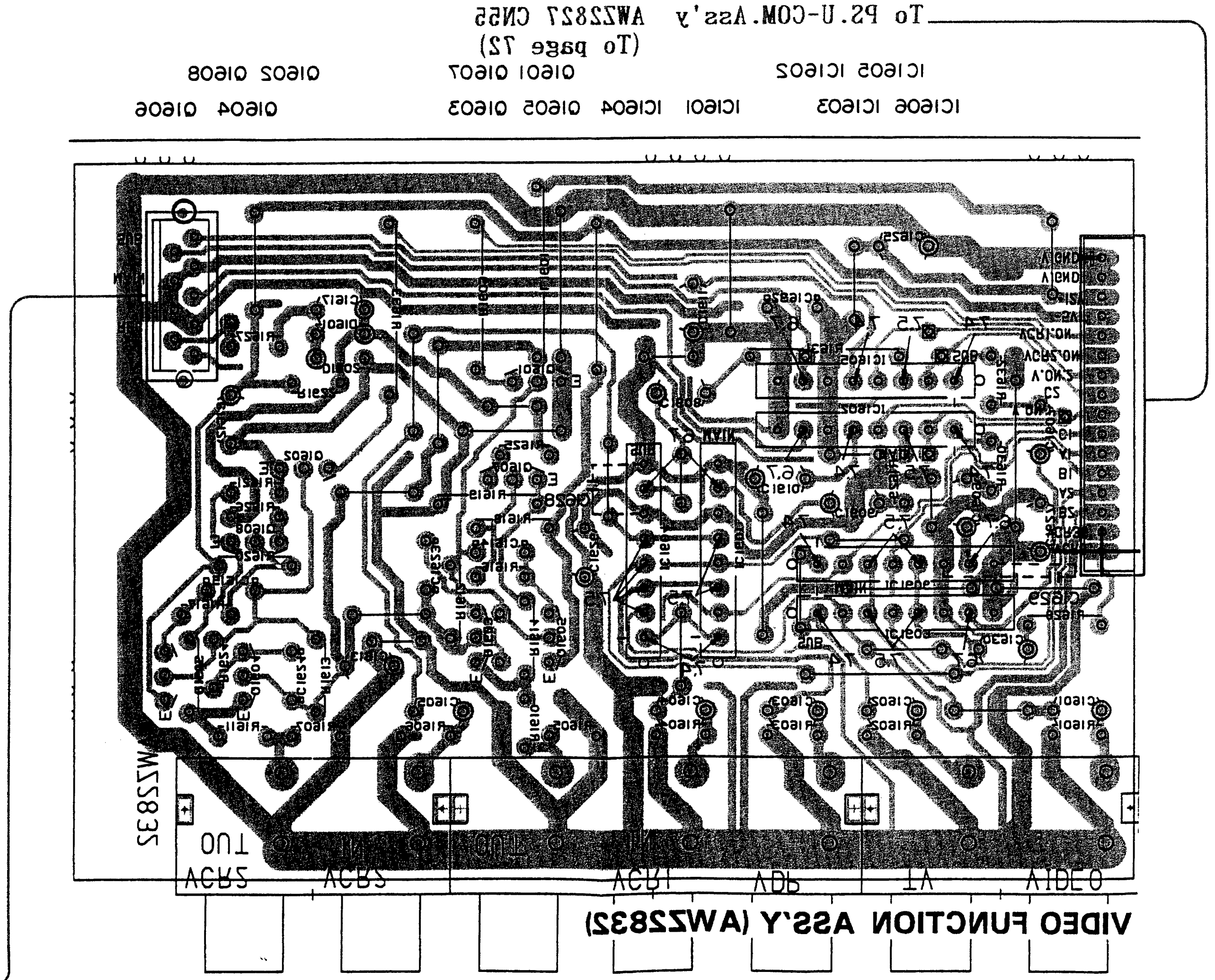
TERMINAL ASS'Y (AWZ2835)

AWZ2835
CENTER.OUT
CENTER.IN
REAR.OUT
REAR.IN
MR.OUT
To PS.U-COM.Ass'y AWZ2827 CN58
(To page 72)



ENHANCER • ADP ASS'Y (AWZ2833)

To PS.U-COM.Ass'y AWZ2827 CN57
(To page 72)
Q1706 Q1709 Q1703 IC1701 Q1704 Q1710 Q1704 IC1703 Q1702 Q1708 Q1705
IC1702 Q1723
IC1705 Q1718 Q1722 Q1724–Q1724 IC1704 Q1719–Q1721 Q1711–Q1716
AWZ2833
BUS
MAIN
REC
NOM.1
NOM.2
ADP.IN
ADP.OUT
MR.NOM

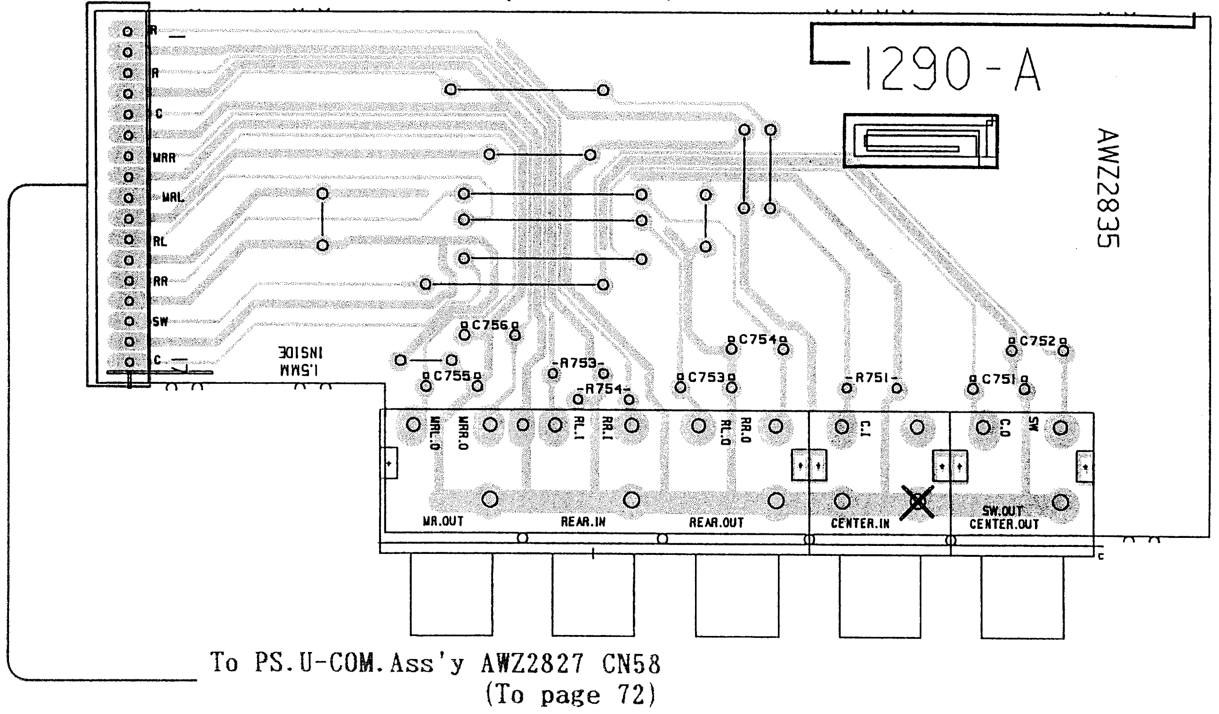


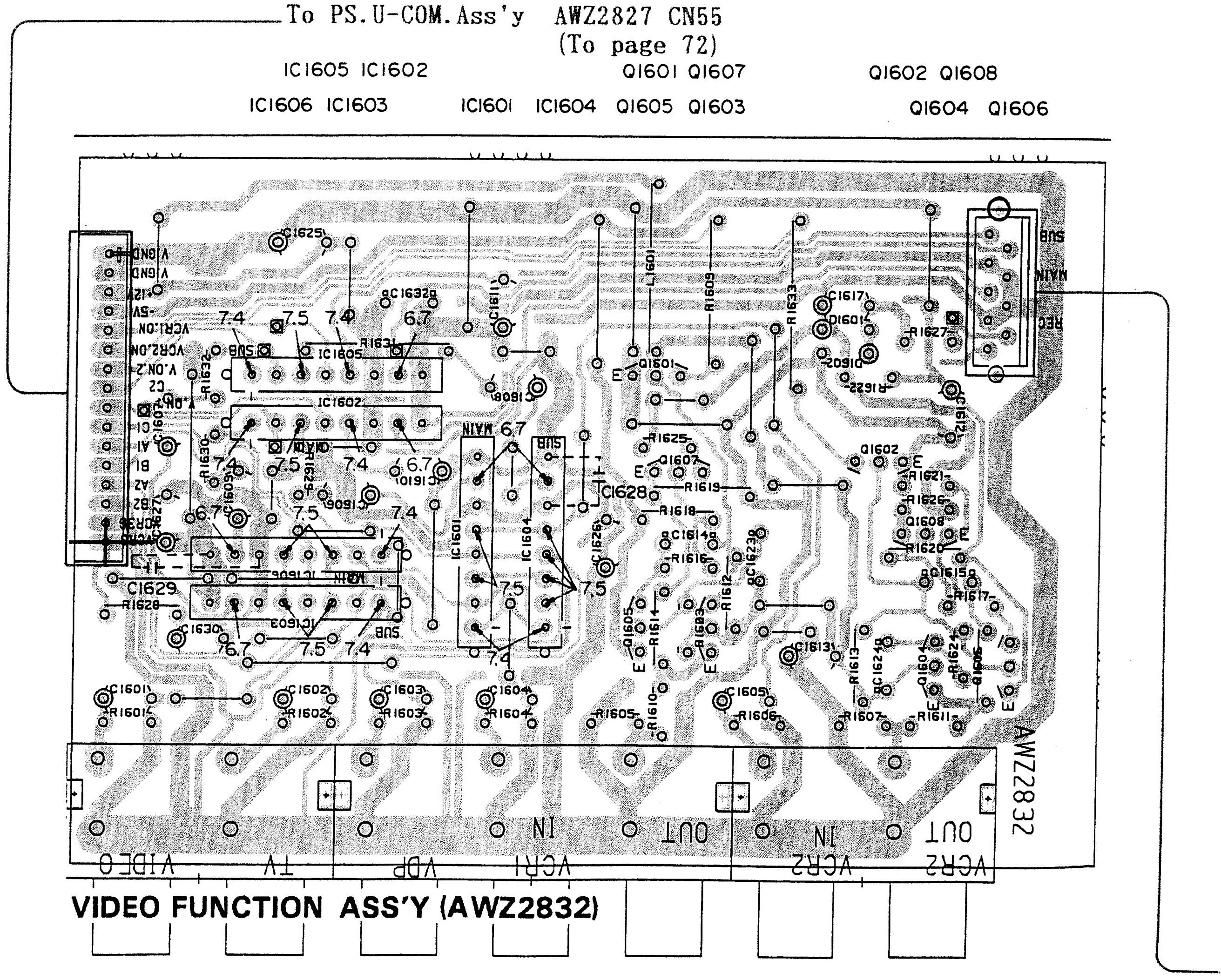
VIDEO FUNCTION ASS'Y (AWZ2832)

To PS.U-COM.Ass'y AWZ2827 CN55
(To page 72)
IC1605 IC1602 Q1601 Q1607 Q1602 Q1608
IC1606 IC1603 IC1601 IC1604 Q1605 Q1603 Q1604 Q1606
AWZ2832
VIDEO
V1
VDP
VCR1
VCR2
OUT

3.2 VIDEO FUNCTION (AWZ2832), TERMINAL (AWZ2835) and ENHANCER • ADP ASS'Y (AWZ2833)

TERMINAL ASS'Y (AWZ2835)


1290-A
AWZ2835
R
R
C
WRR
WRL
RL
RR
SW
C
INSIDE
1.5MM
C756
C755
R753
R754
C754
C753
R751
C752
C751
WR.O
WR.O
RL.I
RR.I
RL.O
RR.O
C.I
C.O
SW
WR.OUT
REAR.IN
REAR.OUT
CENTER.IN
SW.OUT
CENTER.OUT
To PS.U-COM.Ass'y AWZ2827 CN58
(To page 72)


To PS.U-COM.Ass'y AWZ2827 CN55
(To page 72)
IC1605 IC1602
IC1606 IC1603
IC1601 IC1604
Q1601 Q1607
Q1605 Q1603
Q1602 Q1608
Q1604 Q1606
SUB
MAIN
REC
AWZ2832
VIDEO
TV
VDP
VCR1
IN
OUT
VCR2
IN
OUT

VIDEO FUNCTION ASS'Y (AWZ2832)

NOTE

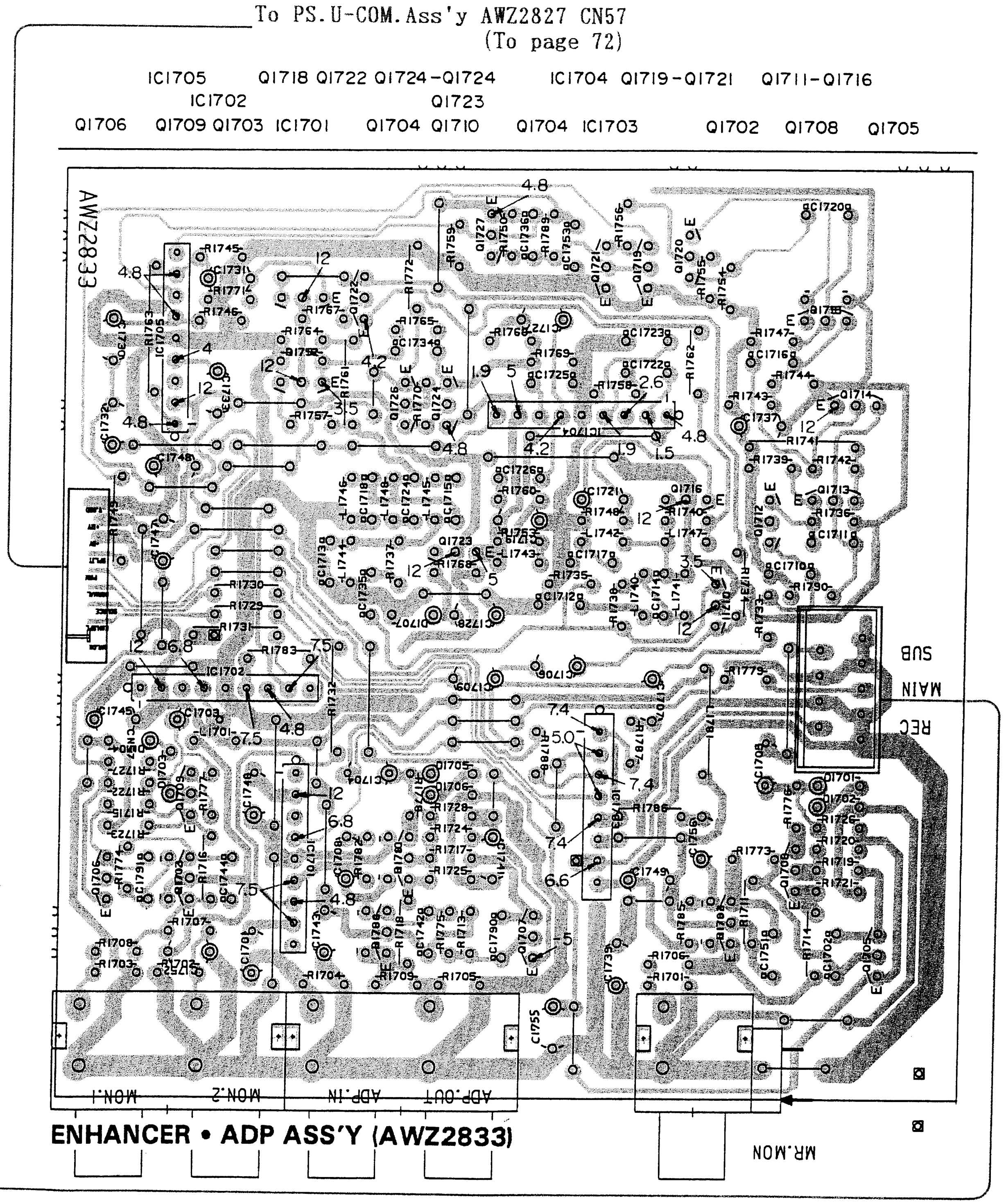
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


To PS.U-COM.Ass'y AWZ2827 CN57
(To page 72)
IC1705
IC1702
Q1706
Q1718 Q1722 Q1724-Q1724
Q1709 Q1703 IC1701
Q1723
Q1704 Q1710
IC1704 Q1719-Q1721
Q1704 IC1703
Q1711-Q1716
Q1702 Q1708 Q1705
AWZ2833
SUB
MAIN
REC
MON.1
MON.2
ADP.IN
ADP.OUT
MR.MON

ENHANCER • ADP ASS'Y (AWZ2833)

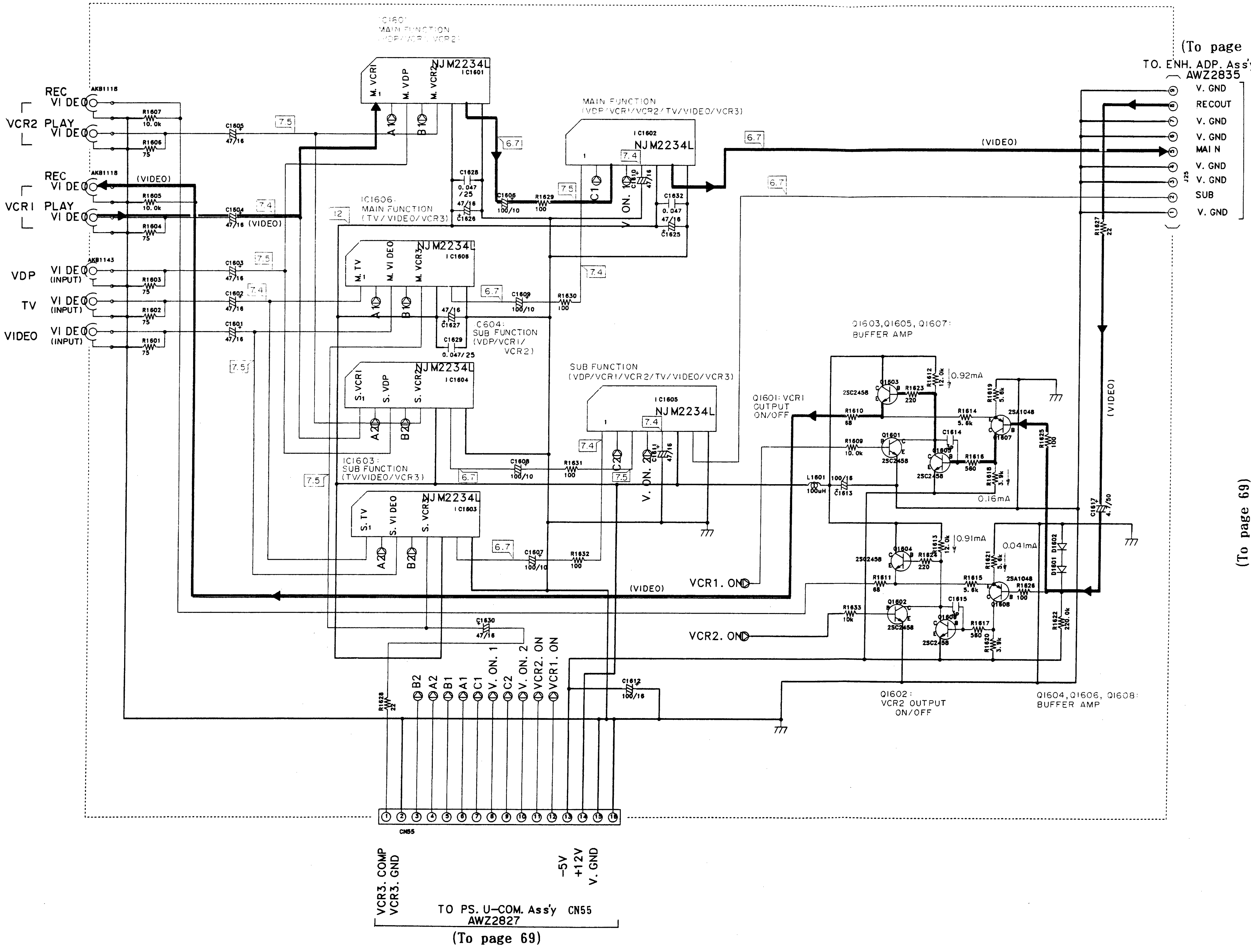
(VIDEO) :VIDEO SIGNAL

(REAR) :REAR AUDIO SIGNAL

(CENTER) :CENTER AUDIO SIGNAL

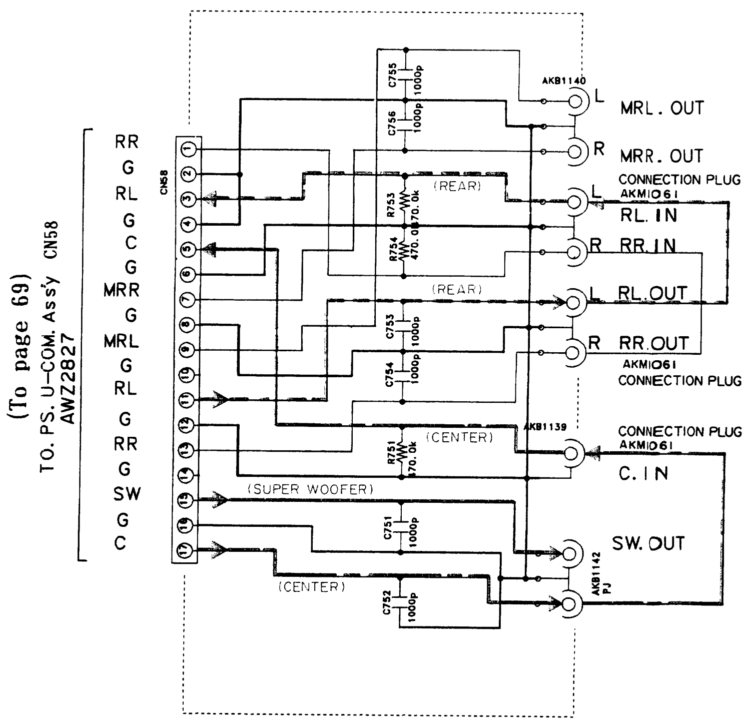
(SUPER WOOFER) :SUPER WOOFER AUDIO SIGNAL

AWZ2832 VIDEO. FUNCTION. ASS'Y

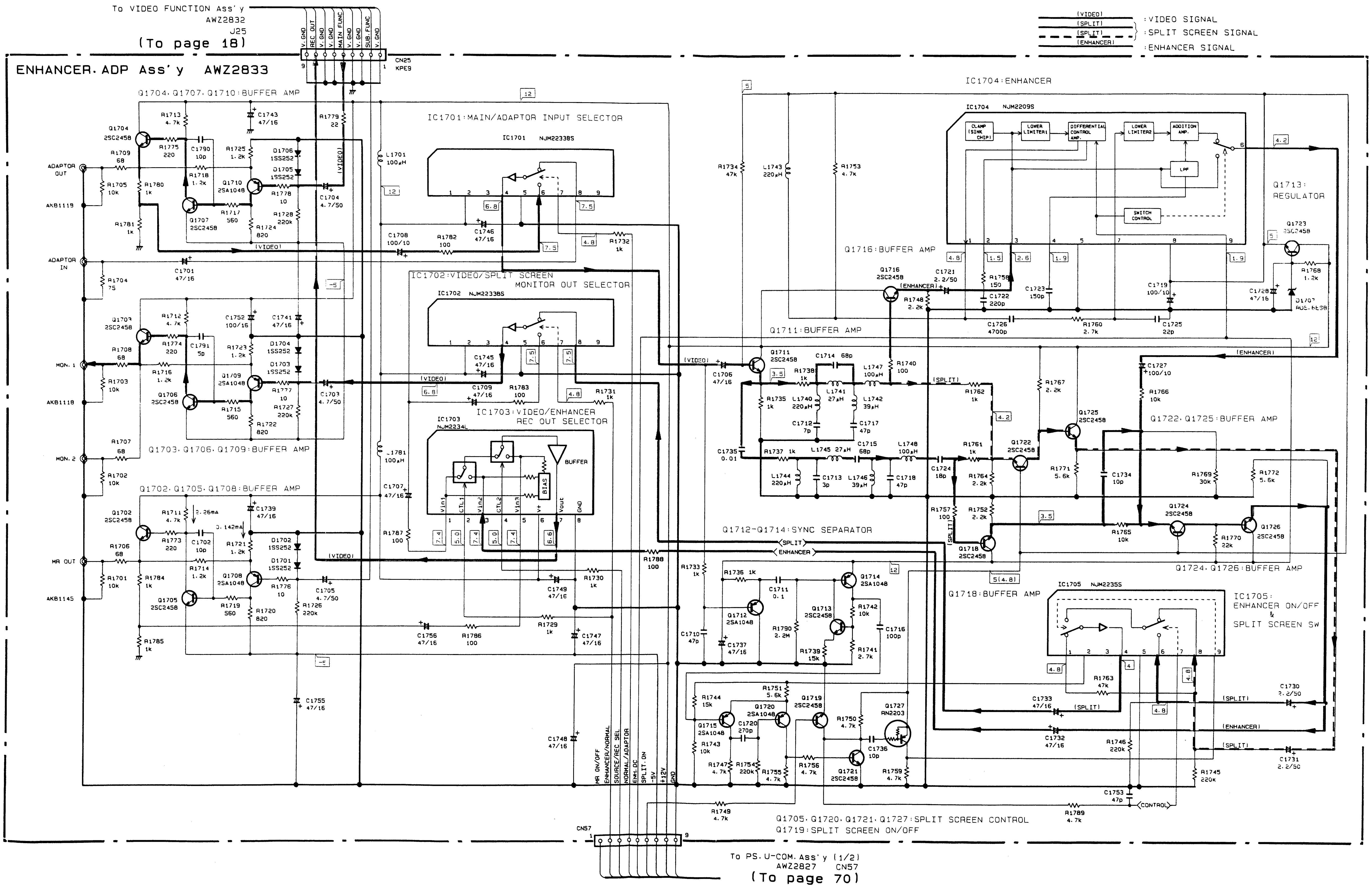


REC VIDEO
VCR2 PLAY VIDEO
REC VIDEO
VCR1 PLAY VIDEO
VDP VIDEO (INPUT)
TV VIDEO (INPUT)
VIDEO VIDEO (INPUT)
AKB1118
AKB1143
IC1601 MAIN FUNCTION (VDP/VCR1/VCR2)
NJM2234L IC1601
M. VCR1
M. VDP
M. VCR2
MAIN FUNCTION (VDP/VCR1/VCR2/TV/VIDEO/VCR3)
IC1602 NJM2234L
IC1606: MAIN FUNCTION (TV/VIDEO/VCR3)
NJM2234L IC1606
M. TV
M. VIDEO
M. VCR3
IC1604: SUB FUNCTION (VDP/VCR1/VCR2)
NJM2234L IC1604
S. VCR1
S. VDP
S. VCR2
SUB FUNCTION (VDP/VCR1/VCR2/TV/VIDEO/VCR3)
IC1605 NJM2234L
IC1603: SUB FUNCTION (TV/VIDEO/VCR3)
NJM2234L IC1603
S. TV
S. VIDEO
S. VCR3
V. ON. 1
V. ON. 2
(VIDEO)
Q1603, Q1605, Q1607: BUFFER AMP
Q1601: VCR1 OUTPUT ON/OFF
Q1602: VCR2 OUTPUT ON/OFF
Q1604, Q1606, Q1608: BUFFER AMP
2SC2458
2SA1048
0.92mA
0.16mA
0.91mA
0.04mA
L1601 100uH
D1601 D1602
VCR1. ON
VCR2. ON
7.5
7.4
6.7
12
(To page 19)
TO. ENH. ADP. Ass'y CN25 AWZ2835
V. GND
RECOUT
V. GND
V. GND
MAIN
V. GND
V. GND
SUB
V. GND
J25
B2
A2
B1
A1
C1
V. ON. 1
C2
V. ON. 2
VCR2. ON
VCR1. ON
CN55
VCR3. COMP
VCR3. GND
-5V
+12V
V. GND
TO PS. U-COM. Ass'y CN55 AWZ2827
(To page 69)

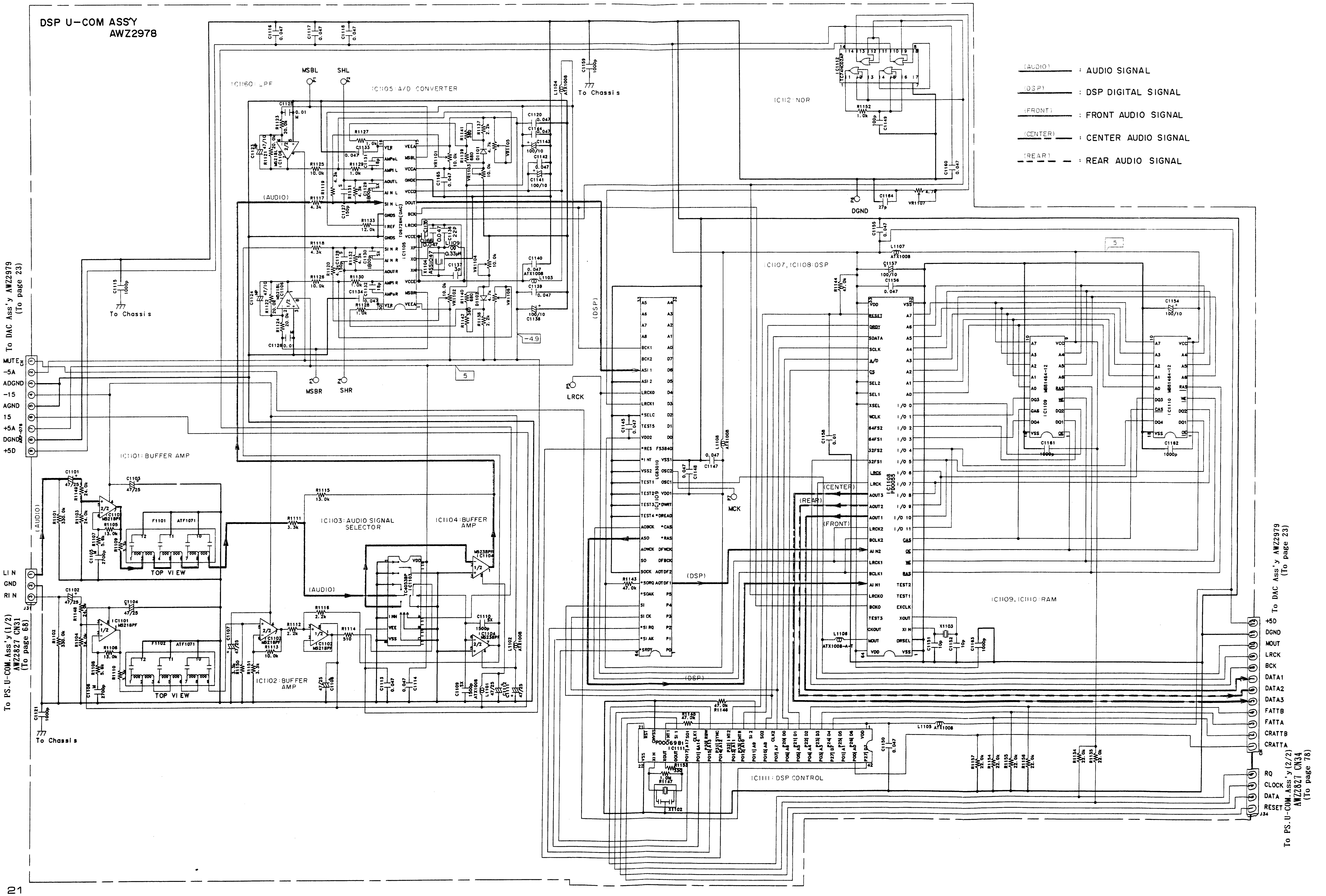
AWZ2835 TERMINAL. ASS'Y

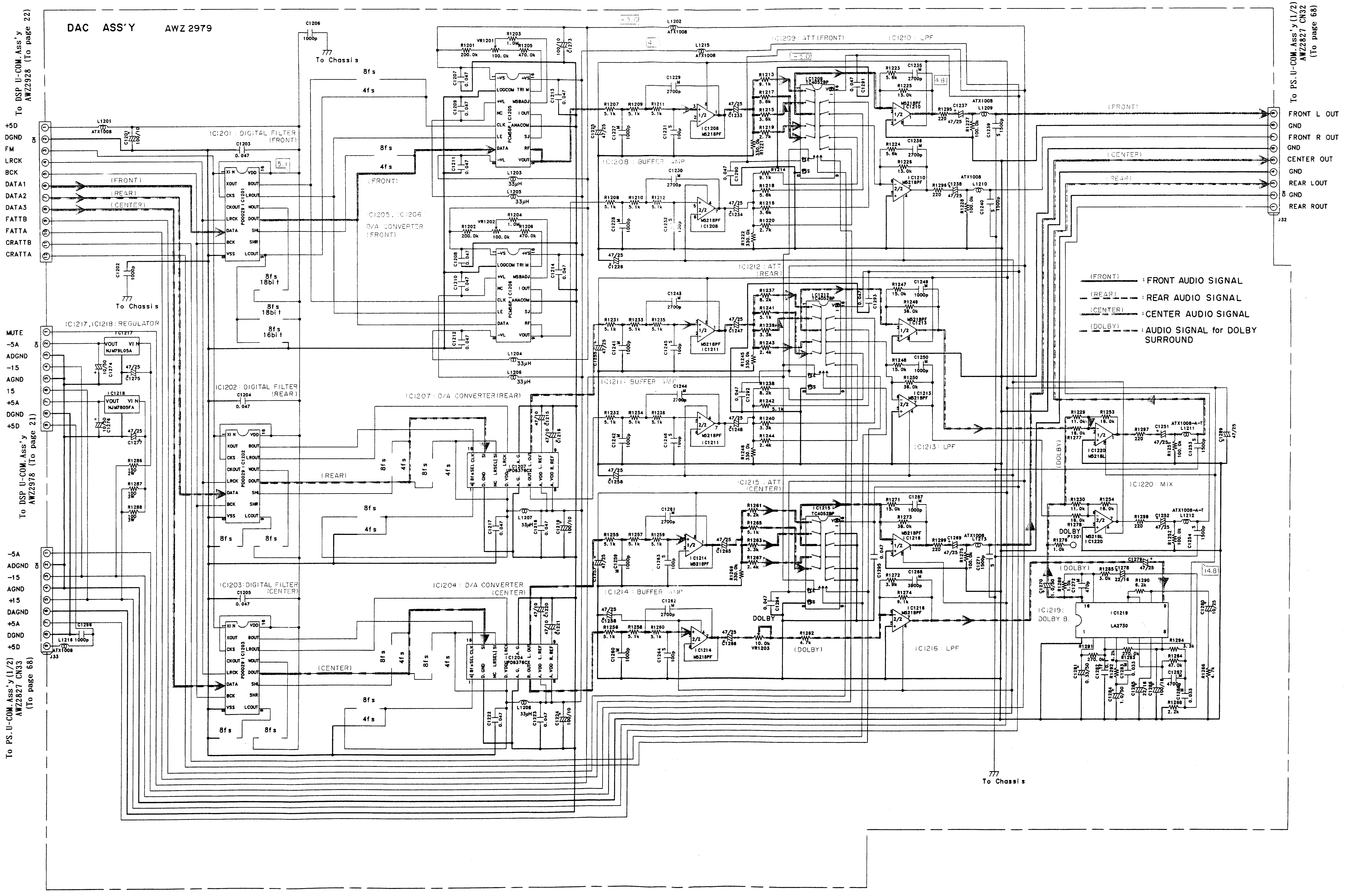


(To page 69)
TO. PS. U-COM. Ass'y CN58 AWZ2827
RR
G
RL
G
C
G
MRR
G
MRL
G
RL
G
RR
G
SW
G
C
CN58
AKB1140
MRL. OUT
MRR. OUT
CONNECTION PLUG AKMI061
RL. IN
RR. IN
RL. OUT
RR. OUT
AKMI061 CONNECTION PLUG
AKB1139
CONNECTION PLUG AKMI061
C. IN
SW. OUT
AKB1142
(REAR)
(CENTER)
(SUPER WOOFER)


To VIDEO FUNCTION Ass'y
AWZ2832
J25
(To page 18)
V.GND
REC OUT
V.GND
V.GND
MAIN FUNC
V.GND
V.GND
SUB.FUNC
V.GND
CN25
KPE9
[VIDEO]
[SPLIT]
[ENHANCER]
: VIDEO SIGNAL
: SPLIT SCREEN SIGNAL
: ENHANCER SIGNAL
ENHANCER. ADP Ass'y AWZ2833
Q1704. Q1707. Q1710: BUFFER AMP
IC1701: MAIN/ADAPTOR INPUT SELECTOR
IC1701 NJM2233BS
IC1702: VIDEO/SPLIT SCREEN MONITOR OUT SELECTOR
IC1702 NJM2233BS
IC1703: VIDEO/ENHANCER REC OUT SELECTOR
IC1703 NJM2234L
BUFFER
BIAS
Vin1
CTL1
Vin2
CTL2
Vin3
V+
Vout
GND
IC1704: ENHANCER
IC1704 NJM2209S
CLAMP (SINK CHIP)
LOWER LIMITER1
DIFFERENTIAL CONTROL AMP.
LOWER LIMITER2
ADDITION AMP.
LPF
SWITCH CONTROL
Q1713: REGULATOR
Q1716: BUFFER AMP
Q1711: BUFFER AMP
Q1722. Q1725: BUFFER AMP
Q1724. Q1726: BUFFER AMP
Q1718: BUFFER AMP
Q1712-Q1714: SYNC SEPARATOR
IC1705 NJM2235S
IC1705: ENHANCER ON/OFF & SPLIT SCREEN SW
Q1703. Q1706. Q1709: BUFFER AMP
Q1702. Q1705. Q1708: BUFFER AMP
Q1705. Q1720. Q1721. Q1727: SPLIT SCREEN CONTROL
Q1719: SPLIT SCREEN ON/OFF
ADAPTOR OUT
AKB1119
ADAPTOR IN
MON. 1
AKB1118
MON. 2
MR OUT
AKB1145
Q1704 2SC2458
Q1707 2SC2458
Q1710 2SA1048
Q1703 2SC2458
Q1706 2SC2458
Q1709 2SA1048
Q1702 2SC2458
Q1705 2SC2458
Q1708 2SA1048
Q1711 2SC2458
Q1712 2SA1048
Q1713 2SC2458
Q1714 2SA1048
Q1715 2SA1048
Q1716 2SC2458
Q1718 2SC2458
Q1719 2SC2458
Q1720 2SA1048
Q1721 2SC2458
Q1722 2SC2458
Q1723 2SC2458
Q1724 2SC2458
Q1725 2SC2458
Q1726 2SC2458
Q1727 RN2203
D1701 1SS252
D1702 1SS252
D1703 1SS252
D1704 1SS252
D1705 1SS252
D1706 1SS252
D1707 HZS.6ESB
L1701 100μH
L1781 100μH
L1740 220μH
L1741 27μH
L1742 39μH
L1743 220μH
L1744 220μH
L1745 27μH
L1746 39μH
L1747 100μH
L1748 100μH
2.26mA
0.142mA
MR ON/OFF
ENHANCER/NORMAL
SOURCE/REC SEL
NORMAL/ADAPTOR
EN+L.DC
SPLIT. ON
-5V
+12V
GND
(CONTROL)
CN57
To PS. U-COM. Ass'y (1/2)
AWZ2827 CN57
(To page 70)

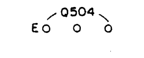
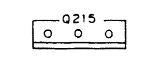
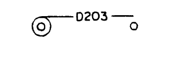
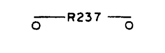
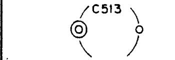
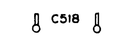
3.3 DSP • U−COM (AWZ2978) and DAC ASS'Y (AWZ2979)


DSP U−COM ASS'Y
AWZ2978
(AUDIO) : AUDIO SIGNAL
(DSP) : DSP DIGITAL SIGNAL
(FRONT) : FRONT AUDIO SIGNAL
(CENTER) : CENTER AUDIO SIGNAL
(REAR) : REAR AUDIO SIGNAL
IC1160: LPF
IC1105: A/D CONVERTER
IC1112: NOR
IC1107, IC1108: DSP
IC1109, IC1110: RAM
IC1101: BUFFER AMP
IC1102: BUFFER AMP
IC1103: AUDIO SIGNAL SELECTOR
IC1104: BUFFER AMP
IC1111: DSP CONTROL
MSBL
SHL
MSBR
SHR
LRCK
MCK
DGND
To Chassis
TOP VIEW
To DAC Ass'y AWZ2979 (To page 23)
MUTE
−5A
ADGND
−15
AGND
15
+5A
DGND
+5D
LIN
GND
RIN
To PS.U-COM.Ass'y (1/2) AWZ2827 CN31 (To page 68)
+5D
DGND
MOUT
LRCK
BCK
DATA1
DATA2
DATA3
FATTB
FATTA
CRATTB
CRATTA
RQ
CLOCK
DATA
RESET
To PS.U-COM.Ass'y (2/2) AWZ2827 CN34 (To page 78)
1
2
3
4
5
6
A
B
C
D


DAC ASS'Y AWZ 2979
To DSP U-COM. Ass'y AWZ2928 (To page 22)
To DSP U-COM. Ass'y AWZ2978 (To page 21)
To PS. U-COM. Ass'y (1/2) AWZ2827 CN33 (To page 68)
To PS. U-COM. Ass'y (1/2) AWZ2827 CN32 (To page 68)
+5D
DGND
FM
LRCK
BCK
DATA1
DATA2
DATA3
FATTB
FATTA
CRATTB
CRATTA
MUTE
-5A
ADGND
-15
AGND
15
+5A
DGND
+5D
-5A
ADGND
-15
AGND
+15
DAGND
+5A
DGND
+5D
J33
J32
FRONT L OUT
GND
FRONT R OUT
GND
CENTER OUT
GND
REAR L OUT
GND
REAR R OUT
IC1201 : DIGITAL FILTER (FRONT)
IC1202 : DIGITAL FILTER (REAR)
IC1203 : DIGITAL FILTER (CENTER)
IC1205, IC1206 D/A CONVERTER (FRONT)
IC1207 : D/A CONVERTER (REAR)
IC1204 : D/A CONVERTER (CENTER)
IC1217, IC1218 : REGULATOR
NJM79L05A
NJM7805FA
IC1209 : ATT (FRONT)
IC1210 : LPF
IC1208 : BUFFER AMP
IC1212 : ATT (REAR)
IC1211 : BUFFER AMP
IC1213 : LPF
IC1215 : ATT (CENTER)
IC1214 : BUFFER AMP
IC1216 : LPF
IC1220 : MIX
IC1219 : DOLBY B.
LA2730
TC4052BP
M5218PF
M5218L
PD0021
PCM58P
UPD6376CX
ATX1008
ATX1008-A-T
To Chassis
To Chassis
To Chassis
8fs
4fs
8fs 18bit
8fs 18bit
8fs 16bit
DOLBY
(FRONT)
(REAR)
(CENTER)
(DOLBY)
FRONT AUDIO SIGNAL
REAR AUDIO SIGNAL
CENTER AUDIO SIGNAL
AUDIO SIGNAL for DOLBY SURROUND
7
8
9
10
11
12
A
B
C
D

NOTE

1. This P.C.B connection diagram i
2. The parts which have been mo
with the corresponding wiring sy

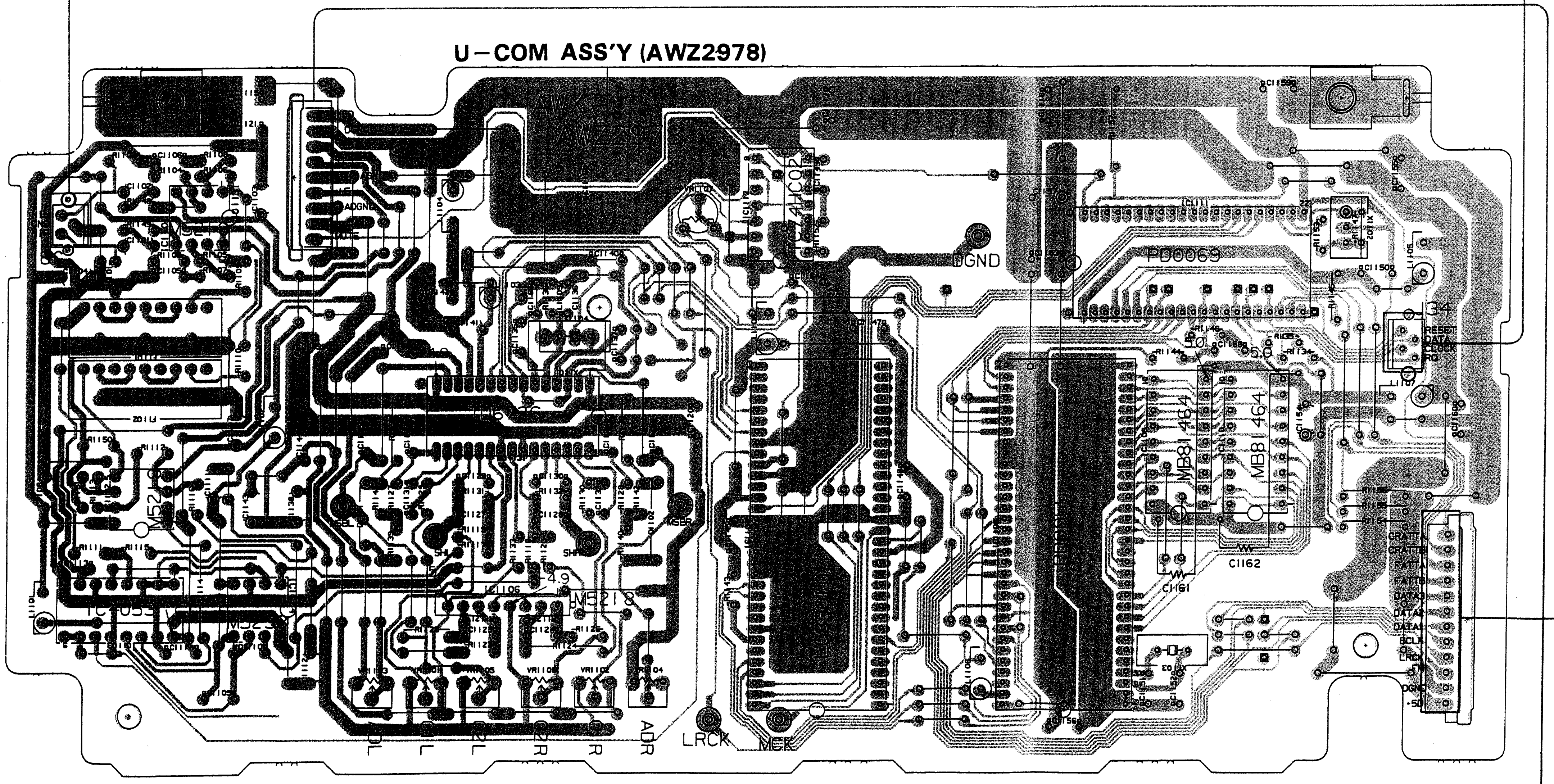
P.C.B. pattern diagram indication







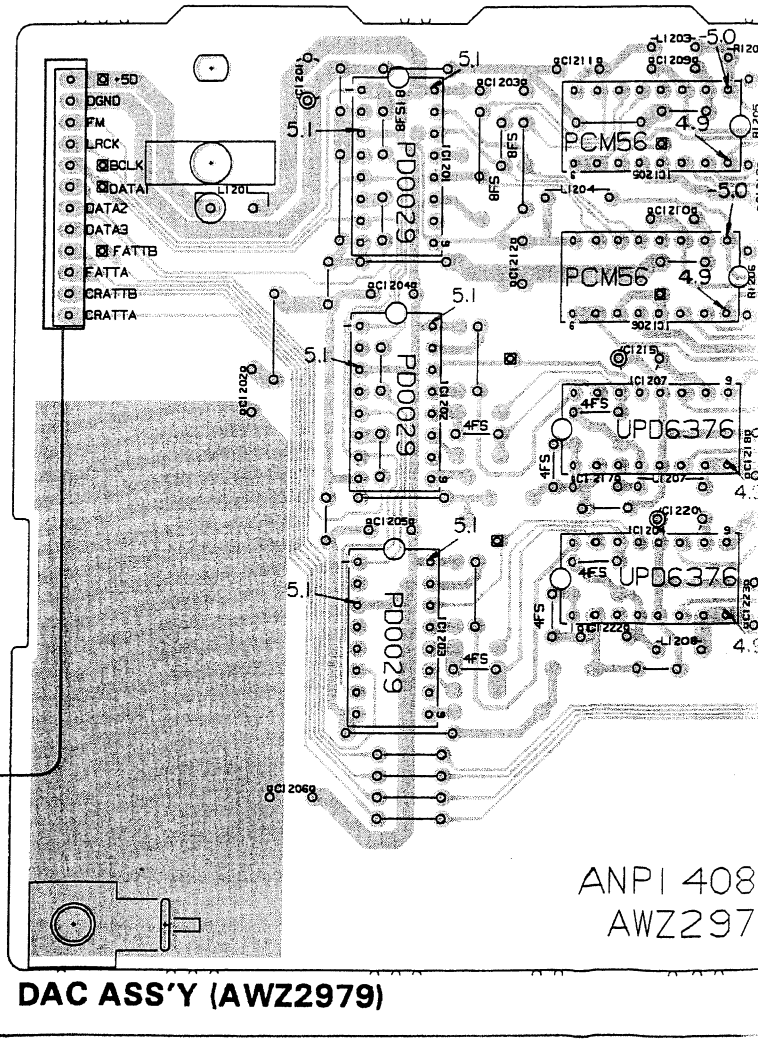
To PS.U-COM.Ass'y AWZ2827 CN31
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN34
(To page 72)

IC1201 IC1205 IC1206
IC1202 IC1207 IC1204
IC1203

U-COM ASS'Y (AWZ2978)


DGND
PD0069
MB81464
MB81464
M5218
C1162
C1161
RESET
DATA
CLOCK
RQ
GRATTA
GRATTB
FATTA
FATTB
DATA
DGND
+5D
DL
L
CL
CR
R
ADR
LRCK
MCK
4.9
5.0
VR1101-VR1107


+5D
DGND
FM
LRCK
BCLK
DATA1
DATA2
DATA3
FATTB
FATTA
CRATTB
CRATTA
PD0029
PD0029
PD0029
PCM56
PCM56
UPD6376
UPD6376
5.1
5.0
4.9
8FS
4FS
ANP1408
AWZ297

DAC ASS'Y (AWZ2979)

IC1101
IC1102
IC1103 IC1104
IC1105
IC1106
IC1112
IC1107
IC1108
IC1111
IC1109 IC1110

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ⊚ (double circles) shows negatine termianl.
4. The diode terminal marked with ⊚ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

To PS.U-COM.Ass'y AWZ2827 CN32
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN34
(To page 72)

IC1201
IC1202
IC1203

IC1205 IC1206
IC1207 IC1204

IC1208
IC1211 IC1214

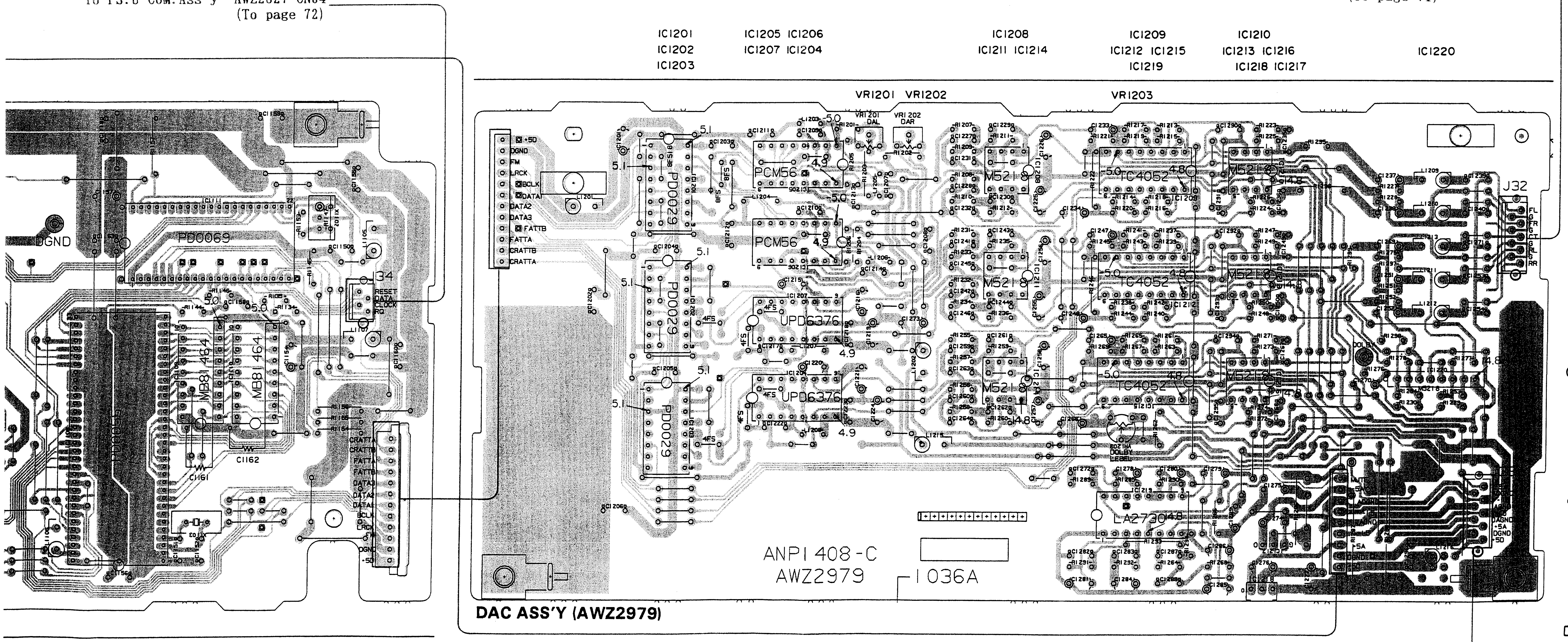
IC1209
IC1212 IC1215
IC1219

IC1210
IC1213 IC1216
IC1218 IC1217

IC1220

VR1201 VR1202

VR1203


A
B
C
D
DGND
PD0069
MB81464
MB81464
PD0059
C1161
C1162
J34
RESET
DATA
CLOCK
RQ
CRATTA
CRATTB
FATTA
FATTB
DATA3
DATA2
DATA1
BCLK
LRCK
FM
DGND
+5D
PD0029
PD0029
PD0029
PCM56
PCM56
UPD6376
UPD6376
VR1201 DAL
VR1202 DAR
M5218
M5218
M5218
TC4052
TC4052
TC4052
VR1203 DOLBY LEVEL
A2730
J32
FL
FR
RR
+5A
DGND
-5D
ANP1408-C
AWZ2979
1036A

DAC ASS'Y (AWZ2979)

IC1111
IC1108 IC1109 IC1110

To PS.U-COM.Ass'y AWZ2827 CN33
(To page 72)

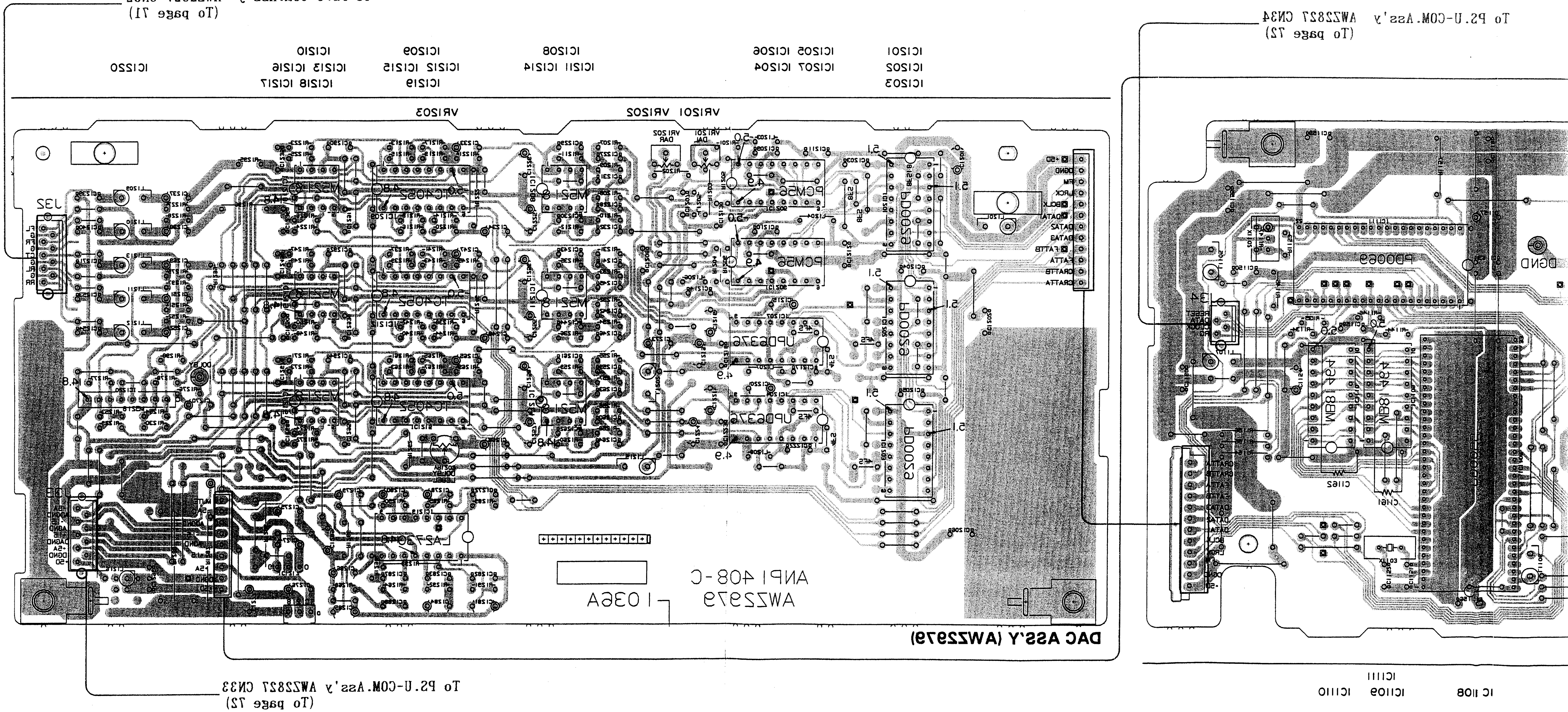
This P.C.B. connection diagram is viewed from the foil side.

A

B

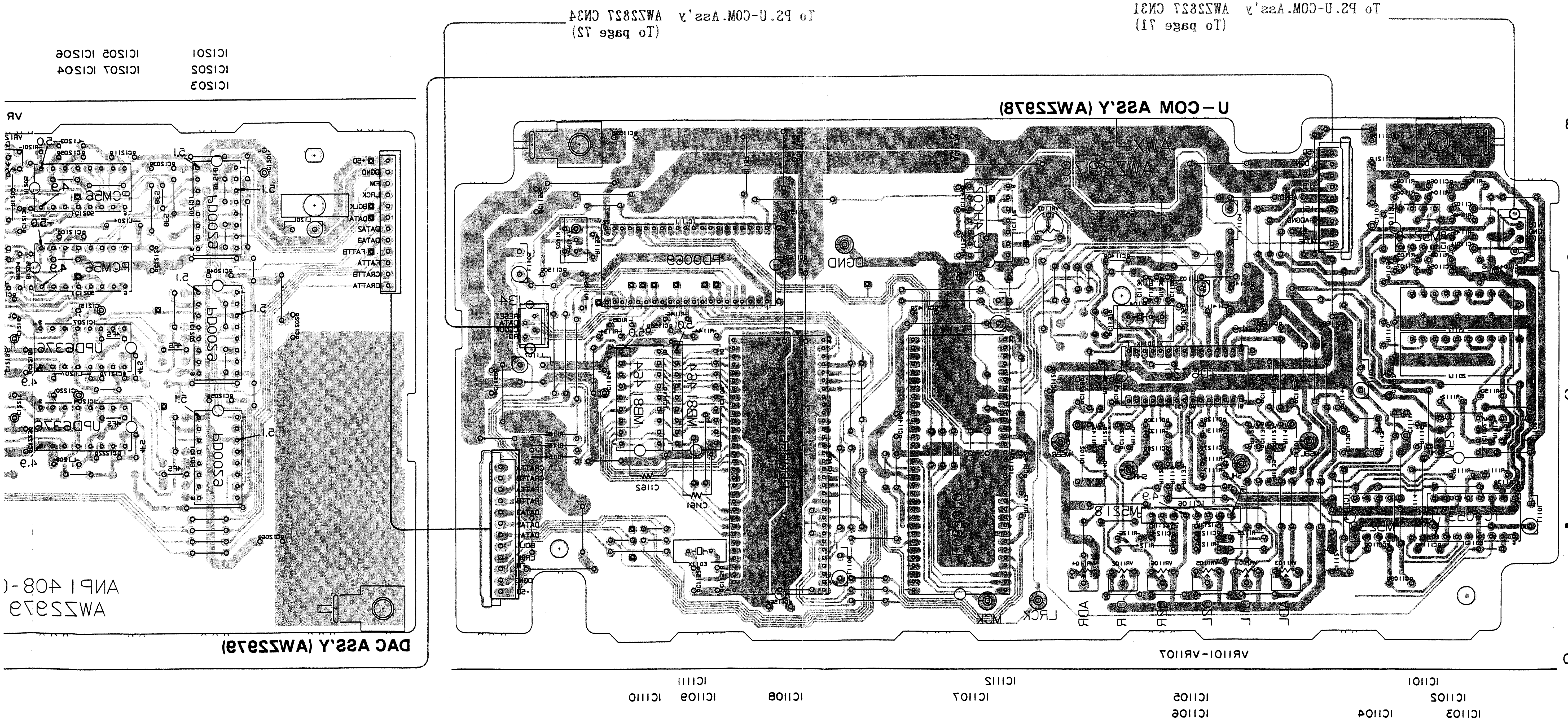
C

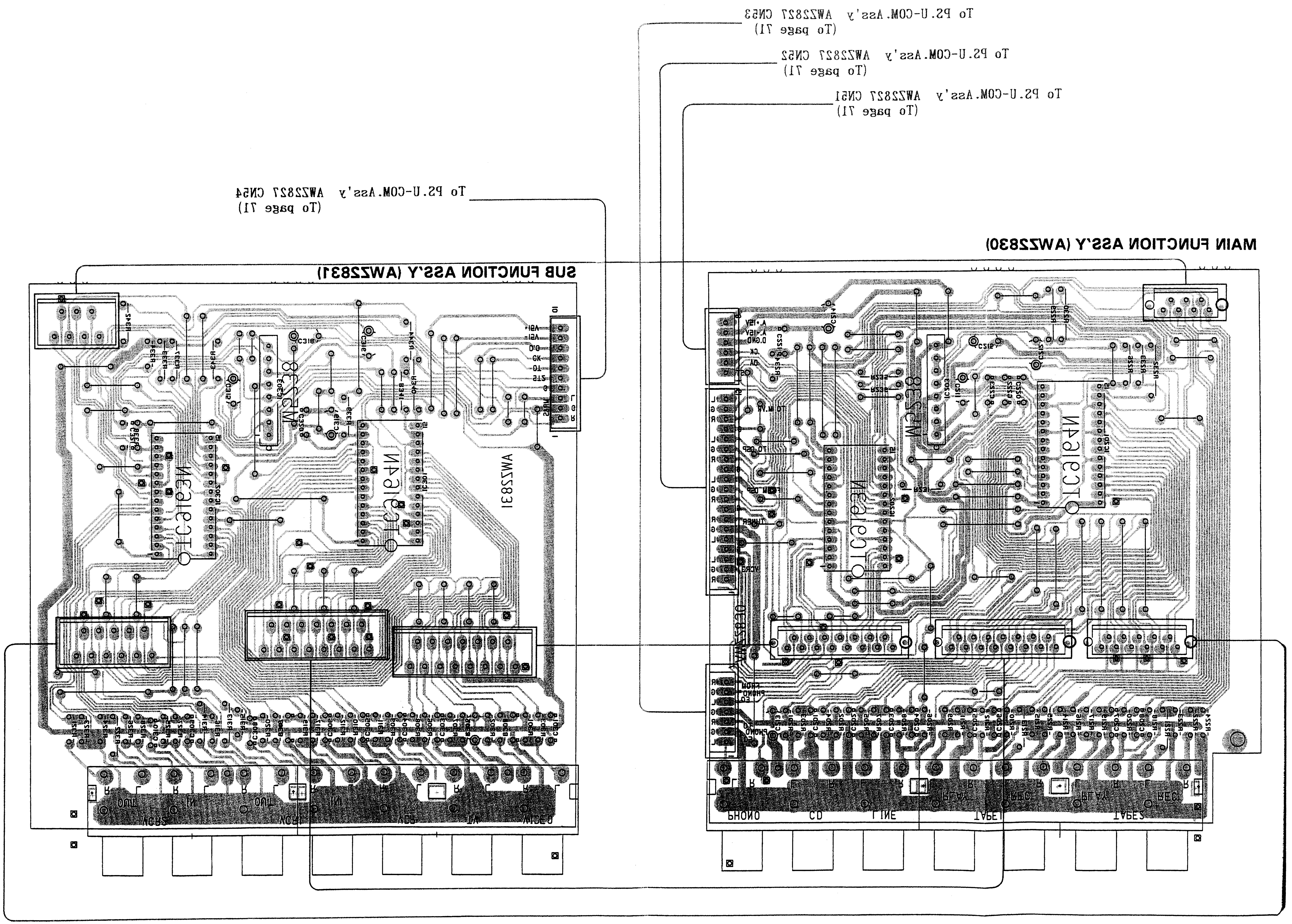
D


To PS.U-COM.Ass'y AWZ2827 CN32
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN34
(To page 72)
IC1220
IC1210
IC1213 IC1216
IC1217 IC1218
IC1209
IC1212 IC1215
IC1219
IC1208
IC1211 IC1214
IC1205 IC1206
IC1204 IC1207
IC1201
IC1202
IC1203
VR1203
VR1201 VR1202
ANP1408-C
AWZ2979
1036A
PD0069
MB84464
PD0029
PCM56
UPD6376
IC1108 IC1109 IC1110
IC1111
To PS.U-COM.Ass'y AWZ2827 CN33
(To page 72)

DAC ASS'Y (AWZ2979)

This P.C.B. connection diagram is viewed from the foil side.


To PS.U-COM.Ass'y AWZ2827 CN34
(To page 72)
To PS.U-COM.Ass'y AWZ2827 CN31
(To page 71)
IC1205 IC1206
IC1207 IC1204
IC1201
IC1202
IC1203
U-COM ASS'Y (AWZ2978)
DAC ASS'Y (AWZ2979)
ANP1408-C
AWZ2979
AWZ2978
PCM56
PD0029
UPD6376
PD0069
MB8416
PD0010
M5218
DGND
MCK
LRCK
VR
VR1101-VR1107
IC1111
IC1109 IC1110
IC1108
IC1112
IC1107
IC1105
IC1106
IC1101
IC1102
IC1103
IC1104
A
B
C
D
6
5
4
3
2
1


To PS.U-COM.Ass'y AWZ2827 CN53
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN52
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN51
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN54
(To page 71)
MAIN FUNCTION ASS'Y (AWZ2830)
SUB FUNCTION ASS'Y (AWZ2831)
IC5301
IC5302
IC5303
IC3301
IC3302
IC3303
AWZ2831
AWZ2830
PHONO
CD
LINE
TAPE1
TAPE2
PLAY
REC
VIDEO
TV
VDP
VCR2
VCR3
IN
OUT

3.4 MAIN FUNCTION (AWZ2830) and SUB FUNCTION ASS'Y (AWZ2831)

NOTE

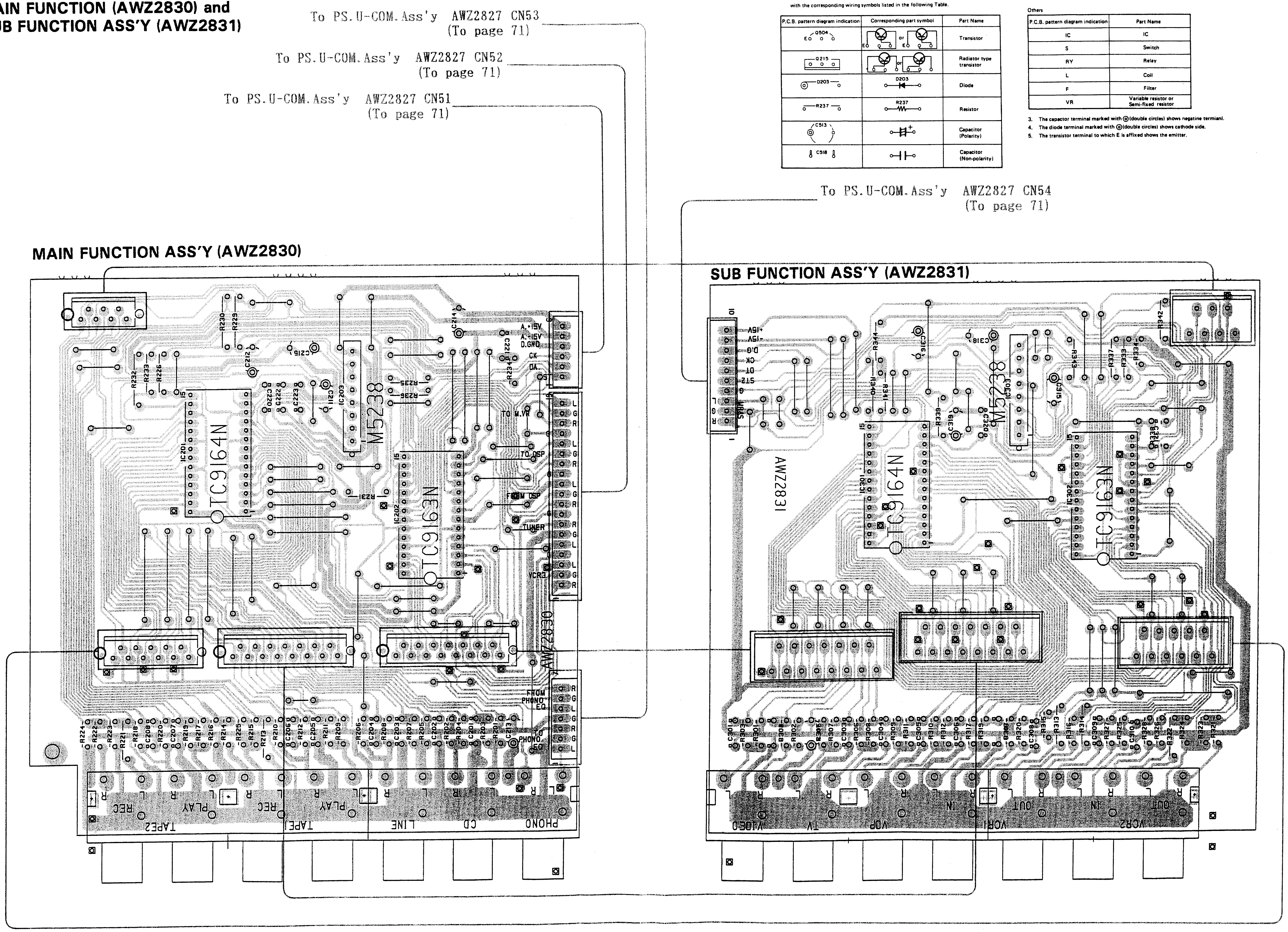
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
E Q504	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎(double circles) shows negatine termiani.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.



To PS.U-COM.Ass'y AWZ2827 CN53
(To page 71)

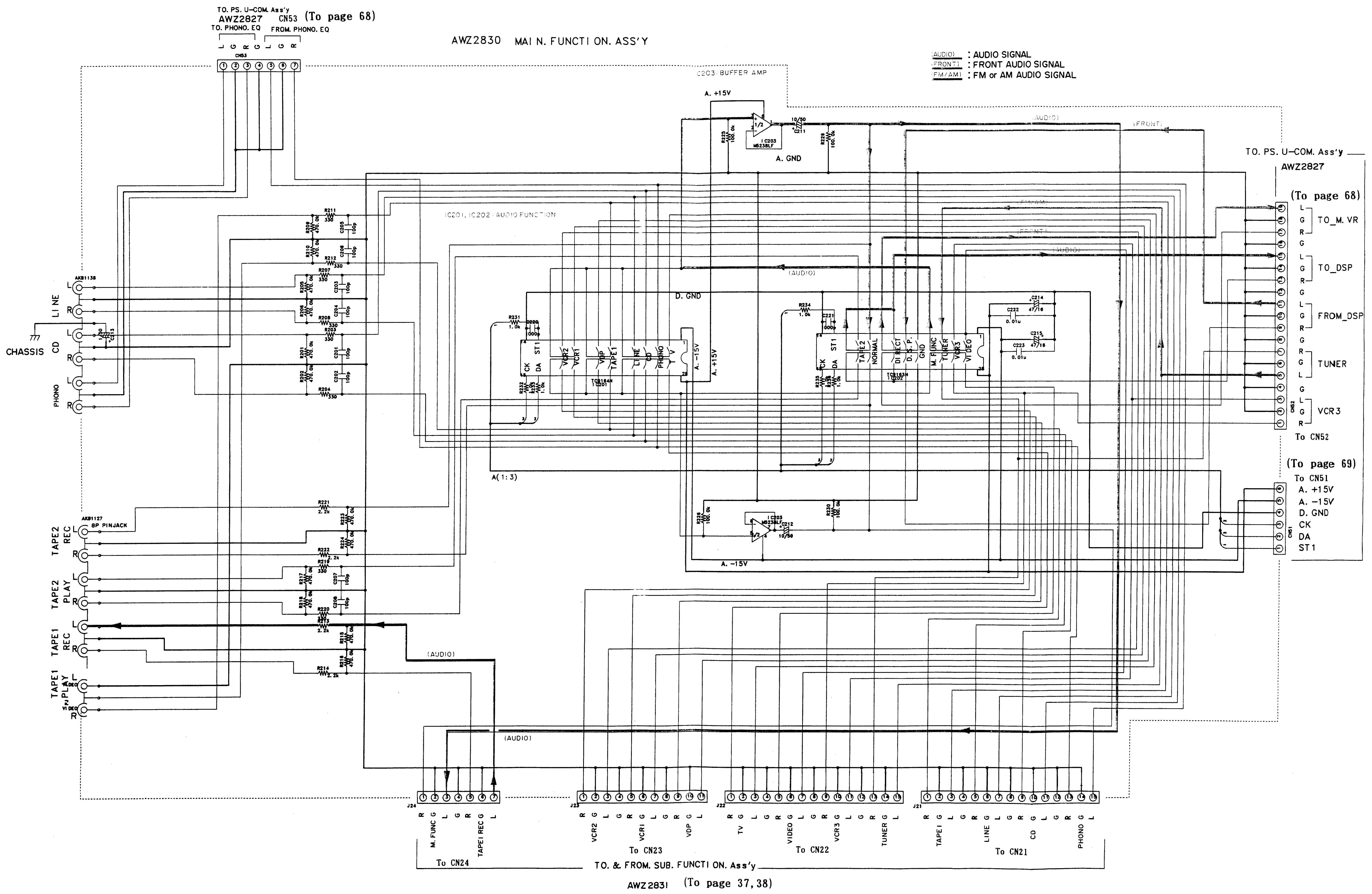
To PS.U-COM.Ass'y AWZ2827 CN52
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN51
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN54
(To page 71)

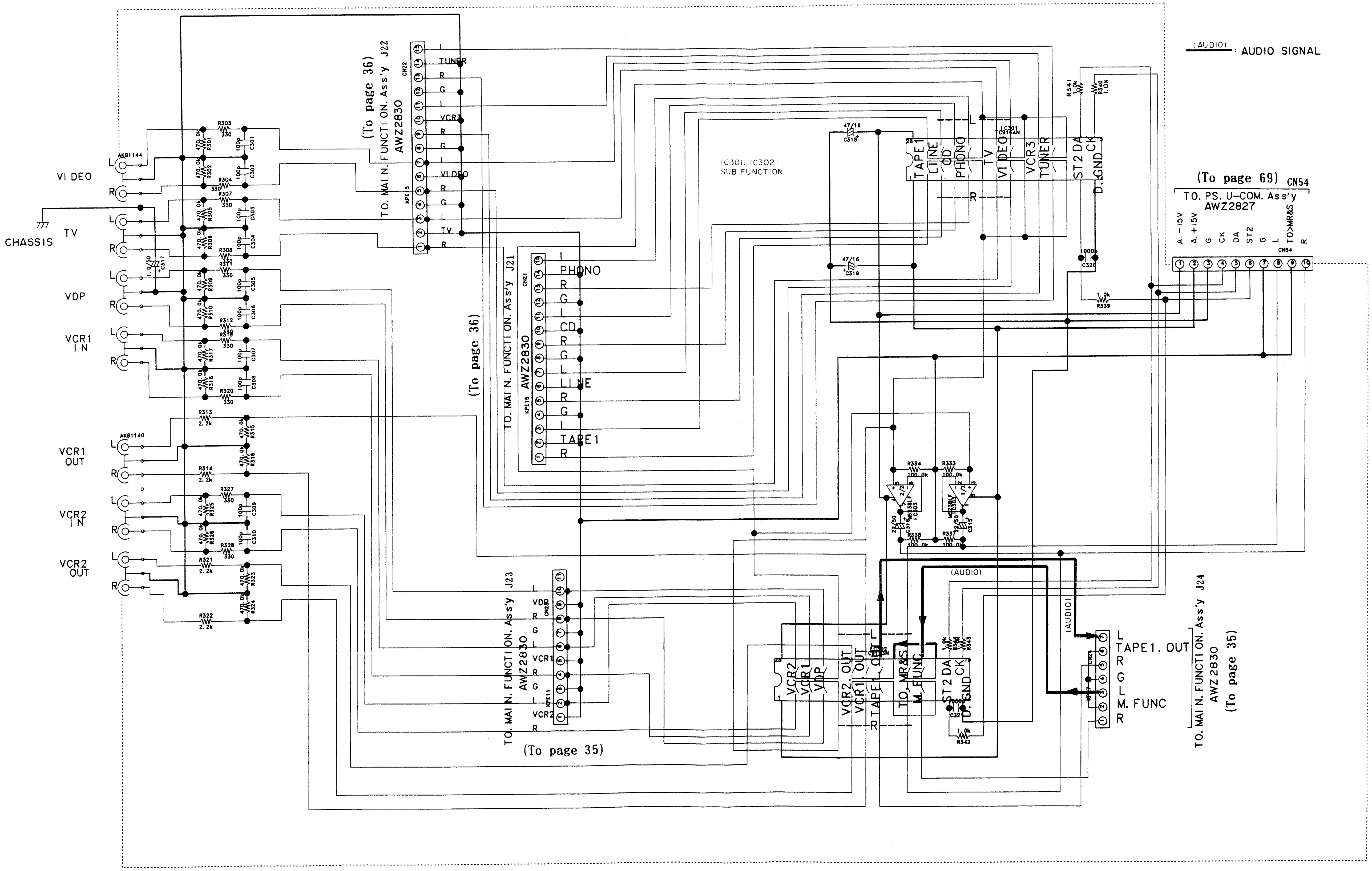
MAIN FUNCTION ASS'Y (AWZ2830)
SUB FUNCTION ASS'Y (AWZ2831)
IC201
TC9164N
IC203
M5238
IC202
TC9163N
AWZ2830
A.+15V
A.-15V
D.GND
CK
DA
ST
TO M.VR
TO DSP
FROM DSP
TUNER
VCR3
FROM PHONO EQ
TO PHONO EQ
TAPE2
REC
PLAY
TAPE1
LINE
CD
PHONO
IC301
TC9164N
IC303
M5238
IC302
TC9163N
AWZ2831
+15V
-15V
D.G
CK
DT
ST2
VIDEO
TV
VDP
IN
VCR1
OUT
VCR2

AWZ2830 MAIN FUNCTION ASS'Y

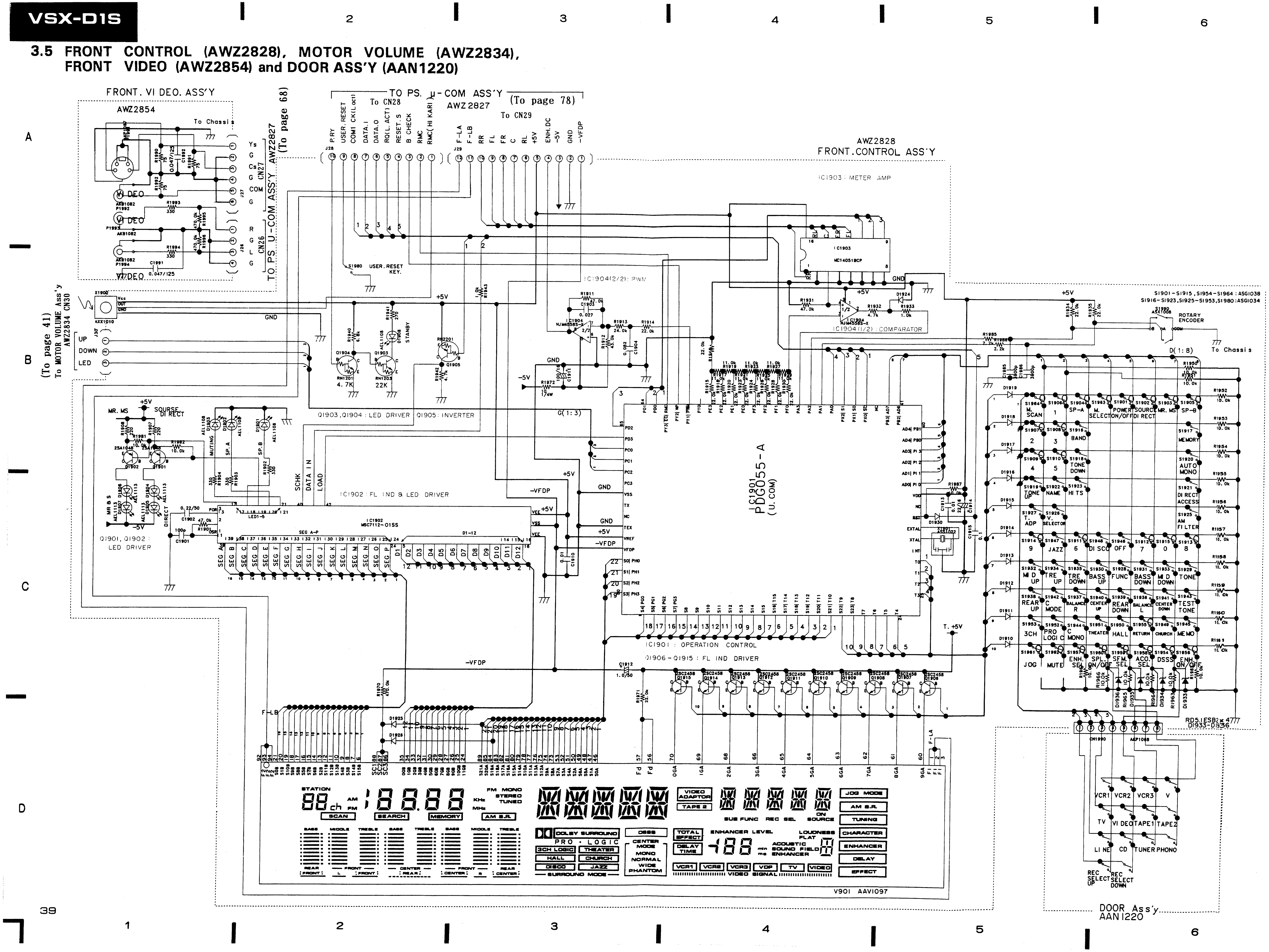

TO. PS. U-COM. Ass'y
AWZ2827 CN53 (To page 68)
TO. PHONO. EQ
FROM. PHONO. EQ
L G R G L G R
CN53
IC203 BUFFER AMP
A. +15V
IC203 M5238LF
A. GND
R227 100.0k
C211 10/50
R229 100.0k
(AUDIO)
(FRONT)
(FM/AM)
(AUDIO) : AUDIO SIGNAL
(FRONT) : FRONT AUDIO SIGNAL
(FM/AM) : FM or AM AUDIO SIGNAL
IC201, IC202 AUDIO FUNCTION
D. GND
R231 1.0k
C220 1000p
ST1
CK
DA
VCR2
VCR1
VDP
TAPE1
LINE
CD
PHONO
V
A. -15V
A. +15V
TC9164N IC201
R232
R233
R234 1.0k
C221 1000p
TAPE2
NORMAL
DIRECT
D. S. P.
GND
M. FUNC
TUNER
VCR3
VIDEO
TC9163N IC202
C214 47/16
C222 0.01u
C215 47/16
C223 0.01u
A(1:3)
R228 100.0k
IC203 M5238LF
C212 10/50
R230 100.0k
A. -15V
AKB1138
LINE
L
R
CD
PHONO
CHASSIS
R211 330
R209 470.0k
C205 100p
R210 470.0k
C206 100p
R212 330
R207 330
R205 470.0k
C203 100p
R206 470.0k
C204 100p
R208 330
R203 330
R201 470.0k
C201 100p
R202 470.0k
C202 100p
R204 330
AKB1127
8P PINJACK
TAPE2 REC
TAPE2 PLAY
TAPE1 REC
TAPE1 PLAY
R221 2.2k
R223 470.0k
R224 470.0k
R222 2.2k
R219 330
R217 470.0k
C207 100p
R218 470.0k
C208 100p
R220 330
R213 2.2k
R215 470.0k
R216 470.0k
R214 2.2k
(AUDIO)
TO. PS. U-COM. Ass'y
AWZ2827
(To page 68)
TO_M. VR
TO_DSP
FROM_DSP
TUNER
VCR3
CN52
To CN52
(To page 69)
To CN51
A. +15V
A. -15V
D. GND
CK
DA
ST1
CN51
J24
R M. FUNC G L G R TAPE1 REC G L
To CN24
J23
R VCR2 G L G R VCR1 G L G R VDP G L
To CN23
J22
R TV G L G R VIDEO G L G R VCR3 G L G R TUNER G L
To CN22
J21
R TAPE1 G L G R LINE G L G R CD G L G R PHONO G L
To CN21
TO. & FROM. SUB. FUNCTION. Ass'y
AWZ2831 (To page 37, 38)
1
2
3
4
5
6
A
B
C
D

AWZ2831 SUB. FUNCTION. ASS'Y

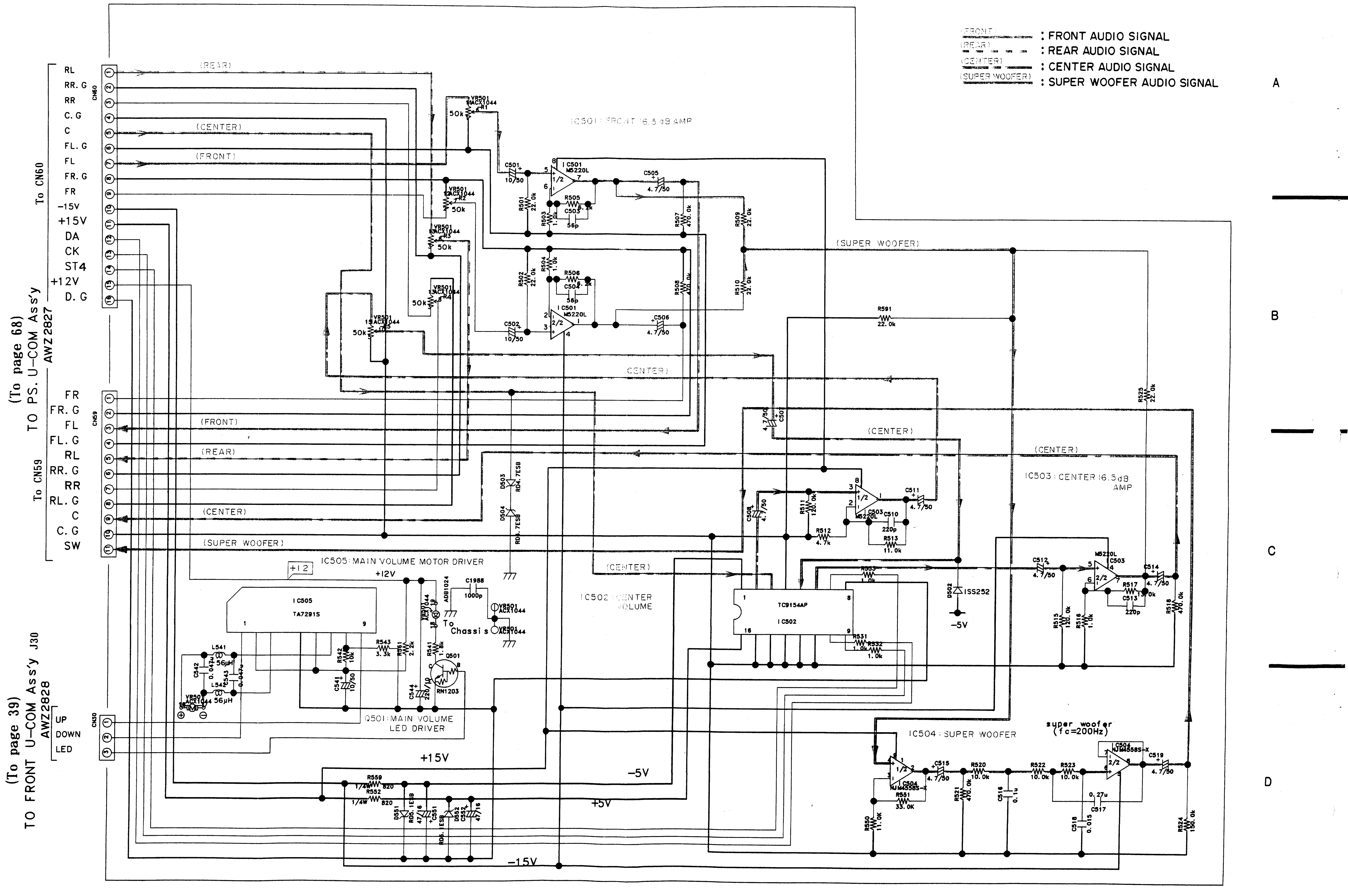
(AUDIO): AUDIO SIGNAL


VIDEO
CHASSIS
TV
VDP
VCR1 IN
VCR1 OUT
VCR2 IN
VCR2 OUT
AKB1144
AKB1140
R301
R302
R303 330
R304
R305
R306
R307 330
R308 330
R309
R310
R312 330
R317
R318
R319 330
R320 330
R313 2.2k
R314 2.2k
R315
R316
R321 2.2k
R322 2.2k
R323
R324
R325
R326
R327 330
R328 330
C301
C302
C303
C304
C305
C306
C307
C308
C309
C310
C317
(To page 36)
TO. MAIN. FUNCTION. Ass'y J22
AWZ2830
CN22
KPE15
L
TUNER
R
G
VCR3
VIDEO
TV
TO. MAIN. FUNCTION. Ass'y J21
CN21
PHONO
CD
LINE
TAPE1
IC301, IC302: SUB FUNCTION
IC301
C318 47/16
C319 47/16
TAPE1
LINE
CD
PHONO
TV
VIDEO
VCR3
TUNER
ST2 DA
CK
D.GND
R341 1.0k
R340 1.0k
C320 1000p
R339 1.0k
(To page 69)
CN54
TO. PS. U-COM. Ass'y
AWZ2827
A. -15V
A. +15V
G
CK
DA
ST2
G
L
TO>MR&S
R
R334 100.0k
R333 100.0k
R338 100.0k
R337 100.0k
IC303
C315
C316
(AUDIO)
TO. MAIN. FUNCTION. Ass'y J23
CN23
VDP
VCR1
VCR2
KPE11
(To page 35)
VCR2
VCR1
VDP
VCR2. OUT
VCR1. OUT
TAPE1. OUT
TO. MR&S
M. FUNC
ST2 DA
CK
D.GND
C321
R342 1.0k
R343
R344
TAPE1. OUT
M. FUNC
TO. MAIN. FUNCTION. Ass'y J24
AWZ2830
(To page 35)
CN24

3.5 FRONT CONTROL (AWZ2828), MOTOR VOLUME (AWZ2834), FRONT VIDEO (AWZ2854) and DOOR ASS'Y (AAN1220)

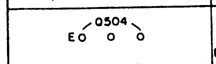
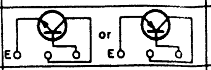
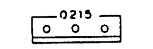
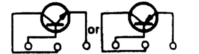
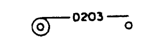
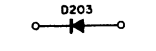
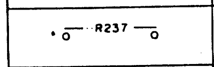
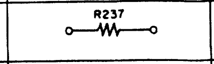
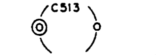
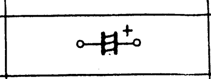
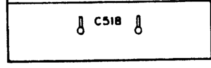
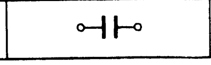

1
2
3
4
5
6
A
B
C
D
FRONT. VIDEO. ASS'Y
AWZ2854
To Chassis
VIDEO
AKB1082
P1992
P1993
P1994
C1991 0.047/125
R1990
R1991
R1992
R1993 330
R1994 330
R1995
R1996
J37
J36
Ys
G
Cs
G
COM
G
R
G
L
G
CN27
CN26
TO PS. U-COM ASS'Y AWZ2827
(To page 68)
TO PS. μ-COM ASS'Y
AWZ2827
(To page 78)
To CN28
To CN29
J28
J29
P.RY
USER. RESET
COM1 CK(L.act)
DATA.I
DATA.O
ROLL.ACT1
RESET.S
B CHECK
RMC
RMC(HI KARI)
F-LA
F-LB
RR
FL
FR
C
RL
+5V
ENH.DC
-5V
GND
-VFDP
AWZ2828
FRONT.CONTROL ASS'Y
IC1903 : METER AMP
IC1903
MC14051BCP
IC1904(2/2) : PWM
IC1904(1/2) : COMPARATOR
NJM4558S-X
S1980 USER.RESET KEY.
X1902
AXX1010
Vcc
OUT
GND
(To page 41)
To MOTOR VOLUME Ass'y
AWZ2834 CN30
UP
DOWN
LED
+5V
STANBY
Q1904
Q1903
Q1905
RN1201 4.7K
RN1203 22K
RN2201
Q1903, Q1904 : LED DRIVER
Q1905 : INVERTER
MR. MS
SOURSE. DIRECT
MUTING
SP.A
SP.B
Q1902
Q1901
2SA1048
MR & S
DIRECT
Q1901, Q1902 : LED DRIVER
SCHK
DATA IN
LOAD
IC1902 : FL IND & LED DRIVER
IC1902
MSC7112-01SS
SEG A-P
D1-12
-VFDP
GND
+5V
G(1:3)
IC1901
PDG055-A
(u.COM)
IC1901 : OPERATION CONTROL
Q1906-Q1915 : FL IND DRIVER
2SC2458
T.+5V
-5V
R1972
C1912 1.0/50
S1901-S1915, S1954-S1964 : ASG1038
S1916-S1923, S1925-S1953, S1980 : ASG1034
S1965
ASX1008
ROTARY ENCODER
To Chassis
D(1:8)
M. SCAN
SP-A
M. SELECTION/OFF
POWER
SOURCE DIRECT
MR. MS
SP-B
BAND
MEMORY
TONE DOWN
AUTO MONO
TONE UP
NAME
HITS
DIRECT ACCESS
T. ADP
SELECTOR
AM FILTER
JAZZ
DISCO
OFF
MID UP
TRE UP
TRE DOWN
BASS UP
FUNC
BASS DOWN
MID DOWN
TONE
REAR UP
C MODE
BALANCE R
CENTER UP
REAR DOWN
BALANCE L
CENTER DOWN
TEST TONE
3CH
PRO LOGIC
MONO
THEATER
HALL
RETURN
CHURCH
MEMO
JOG
MUTE
ENH. SEL
SPL. ON/OFF
SFM. SEL
ACO. SEL
DSSS
ENH. ON/OFF
RD5.1ESB2×4
D1933-D1936
CN1990
AKP1068
VCR1
VCR2
VCR3
V
TV
VIDEO
TAPE1
TAPE2
LINE
CD
TUNER
PHONO
REC SELECT UP
REC SELECT DOWN
DOOR Ass'y
AAN1220
F-LB
F-LA
STATION
ch
AM
FM
FM MONO
STEREO
TUNED
KHz
MHz
SCAN
SEARCH
MEMORY
AM S.R.
VIDEO ADAPTOR
TAPE 2
SUB FUNC
REC SEL
SOURCE
ON
JOG MODE
AM S.R.
TUNING
CHARACTER
ENHANCER
DELAY
EFFECT
BASS
MIDDLE
TREBLE
REAR
FRONT
CENTER
L
R
DOLBY SURROUND
PRO · LOGIC
3CH LOGIC
THEATER
HALL
CHURCH
DISCO
JAZZ
SURROUND MODE
DSSS
CENTER MODE
MONO
NORMAL
WIDE
PHANTOM
TOTAL EFFECT
DELAY TIME
ENHANCER LEVEL
LOUDNESS
FLAT
ACOUSTIC
SOUND FIELD
ENHANCER
min
ms
VCR1
VCR2
VCR3
VDP
TV
VIDEO
VIDEO SIGNAL
V901 AAV1097

AWZ2834 MOTOR. VOLUME. ASS'Y


7
8
9
10
11
12
A
B
C
D
(FRONT) : FRONT AUDIO SIGNAL
(REAR) : REAR AUDIO SIGNAL
(CENTER) : CENTER AUDIO SIGNAL
(SUPER WOOFER) : SUPER WOOFER AUDIO SIGNAL
To CN60
(To page 68)
TO PS. U-COM Ass'y
AWZ2827
CN60
RL
RR. G
RR
C. G
C
FL. G
FL
FR. G
FR
-15V
+15V
DA
CK
ST4
+12V
D. G
To CN59
CN59
FR
FR. G
FL
FL. G
RL
RR. G
RR
RL. G
C
C. G
SW
(REAR)
(CENTER)
(FRONT)
(SUPER WOOFER)
IC501 : FRONT 16.5 dB AMP
IC501
M5220L
1/2
2/2
VR501
ACX1044
R1
R2
R3
R4
R5
50k
C501 10/50
C502 10/50
C505 4.7/50
C506 4.7/50
R501 22.0k
R502 22.0k
R503 1.0k
R504 1.0k
R505 2.2k
R506 2.2k
C503 56p
C504 56p
R507 470.0k
R508 470.0k
R509 22.0k
R510 22.0k
R591 22.0k
R525 22.0k
C507 4.7/50
C508 4.7/50
C511 4.7/50
R511 120.0k
R512 4.7k
R513 11.0k
C509
C510 220p
M5220L
D503 RD4.7ESB
D504 RD4.7ESB
IC503 : CENTER 16.5 dB AMP
C512 4.7/50
C513 220p
C514 4.7/50
R515 120.0k
R516 1.0k
R517 11.0k
R518 470.0k
D502
1SS252
-5V
IC502 : CENTER VOLUME
TC9154AP
IC502
R533 1.0k
R531 1.0k
R532 1.0k
IC505 : MAIN VOLUME MOTOR DRIVER
+12
+12V
IC505
TA7291S
L541 56µH
L542 56µH
C542 0.047µ
C543 0.047µ
VR501 ACX1044
R543 3.3k
R542 10k
R561 2.2k
R541 1.8k
C541 10/50
C544 220/10
Q501
RN1203
ADB1024
C1988 1000p
To Chassis
VR501 ACX1044
Q501 : MAIN VOLUME LED DRIVER
(To page 39)
TO FRONT U-COM Ass'y J30
AWZ2828
CN30
UP
DOWN
LED
+15V
-5V
+5V
-15V
R559 1/4W 820
R552 1/4W 820
D551 RD5.1ESB
D552 RD5.1ESB
C551 47/16
C552 47/16
IC504 : SUPER WOOFER
super woofer (fc=200Hz)
IC504
NJM4558S-X
C515 4.7/50
C519 4.7/50
R520 10.0k
R521 470.0k
R522 10.0k
R523 10.0k
R524 150.0k
R550 11.0k
R551 33.0k
C516 0.1µ
C517 0.27µ
C518 0.015

NOTE

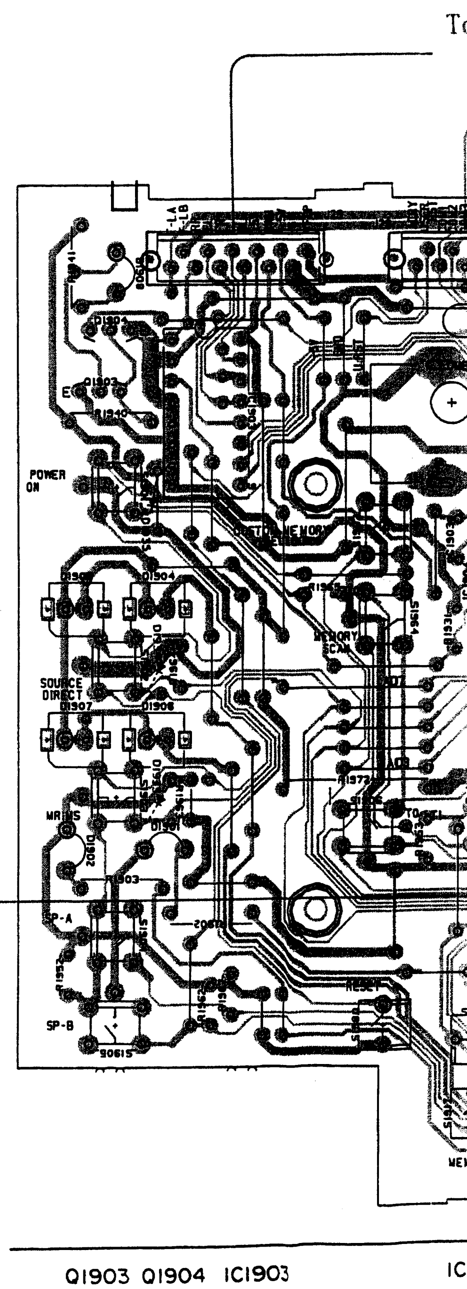
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

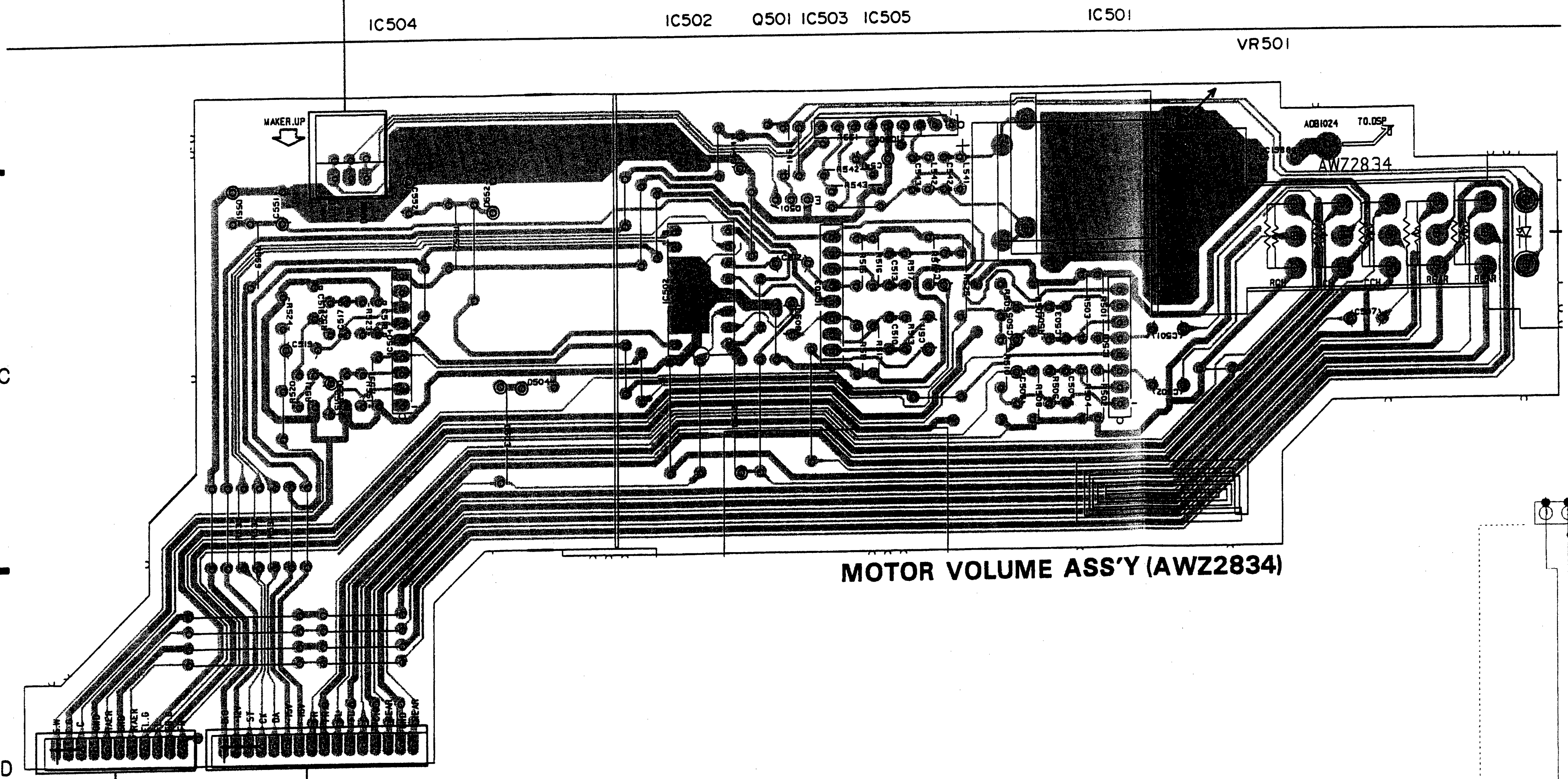
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
 Q504		Transistor
 Q215		Radiator type transistor
 D203	 D203	Diode
 R237	 R237	Resistor
 C513		Capacitor (Polarity)
 C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎ (double circles) shows negatine termianl.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

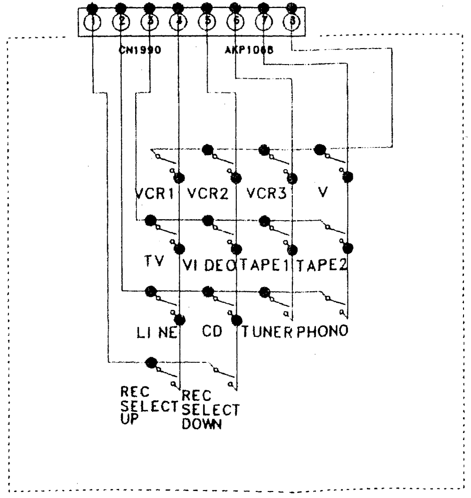

To
POWER ON
SOURCE DIRECT
MEMORY
SP-A
SP-B
RESET
Q1903 Q1904 IC1903
IC


IC504
IC502
Q501 IC503 IC505
IC501
VR501
MAKER UP
ADB1024
AWZ2834

MOTOR VOLUME ASS'Y (AWZ2834)

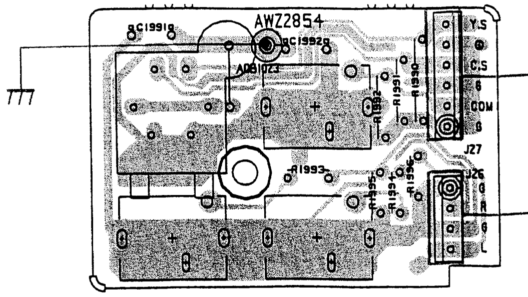
To PS.U-COM.Ass'y AWZ2827 CN60
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN59
(To page 71)


1 2 3 4 5 6 7 8
CN1990
AKP1068
VCR1
VCR2
VCR3
V
TV
VIDEO
TAPE1
TAPE2
LINE
CD
TUNER
PHONO
REC SELECT UP
REC SELECT DOWN

DOOR ASS'Y (AAN1220)

FRONT VIDEO ASS'Y (AWZ2854)


AWZ2854
J27
J26
Y.S
C.S
COM

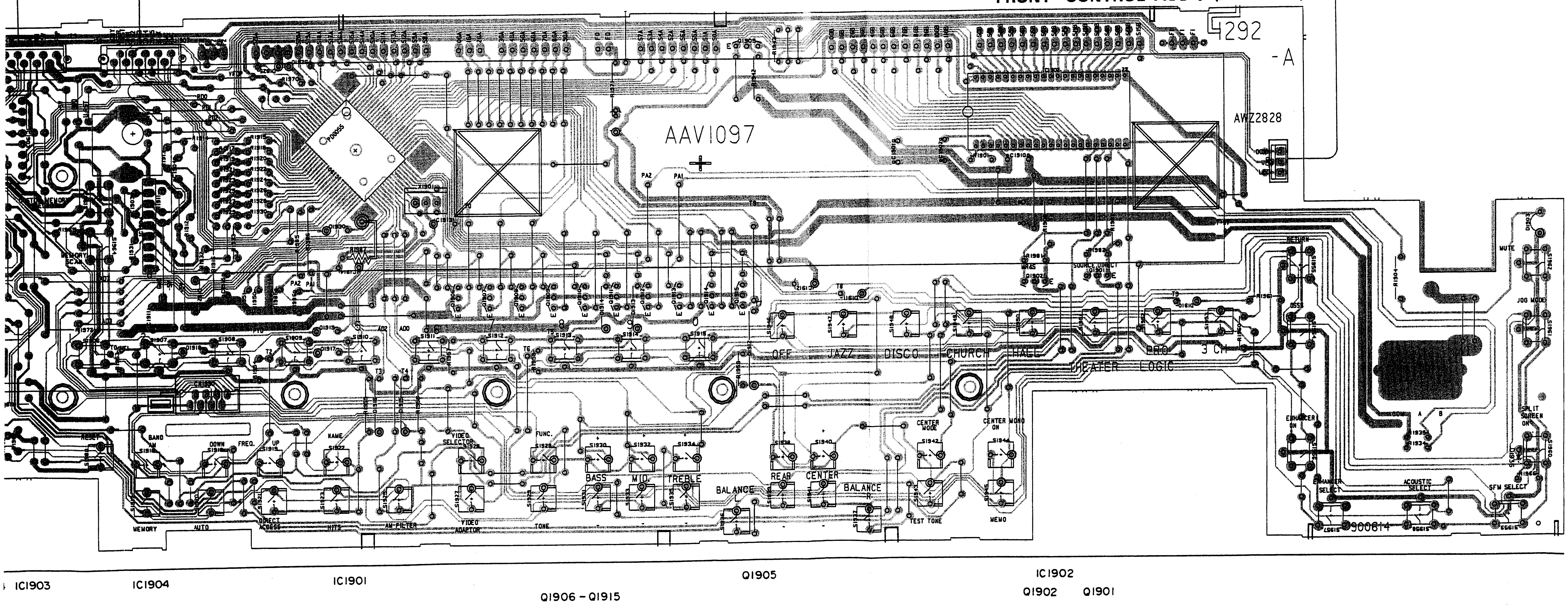
To PS.U-COM.Ass'y AWZ2827 CN27
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN26
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN29
(To page 72)

To PS.U-COM.Ass'y AWZ2827 CN28
(To page 72)

FRONT CONTROL ASS'Y (AWZ2828)

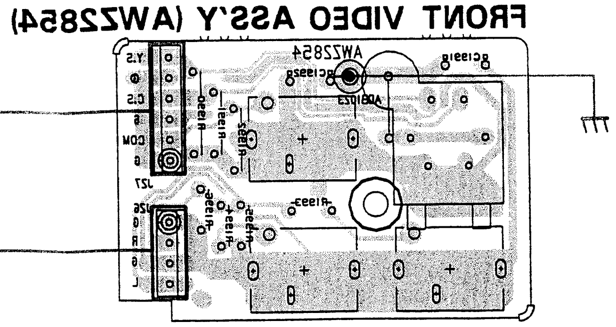

4292
-A
AAV1097
AWZ2828
MEMORY SCAN
MUTE
RETURN
SOURCE DIRECT
JOG MODE
OFF
JAZZ
DISCO
CHURCH
HALL
THEATER
PRO LOGIC
3 CH
BAND AM
DOWN
FREQ.
UP
NAME
VIDEO SELECTOR
FUNC.
BASS
MID
TREBLE
BALANCE
REAR
CENTER
BALANCE R
CENTER MODE
CENTER MONO ON
ENHANCER ON
ENHANCER SELECT
ACOUSTIC SELECT
SFM SELECT
SPLIT SCREEN ON
MEMORY
AUTO
DIRECT ACCESS
HITS
AM-FILTER
VIDEO ADAPTOR
TONE
TEST TONE
MEMO
IC1903
IC1904
IC1901
Q1906 - Q1915
Q1905
IC1902
Q1902
Q1901

This P.C.B. connection diagram is viewed from the foil side.

To PS.U-COM. Ass'y AWZ2827 CN27
(To page 71)

To PS.U-COM. Ass'y AWZ2827 CN26
(To page 71)

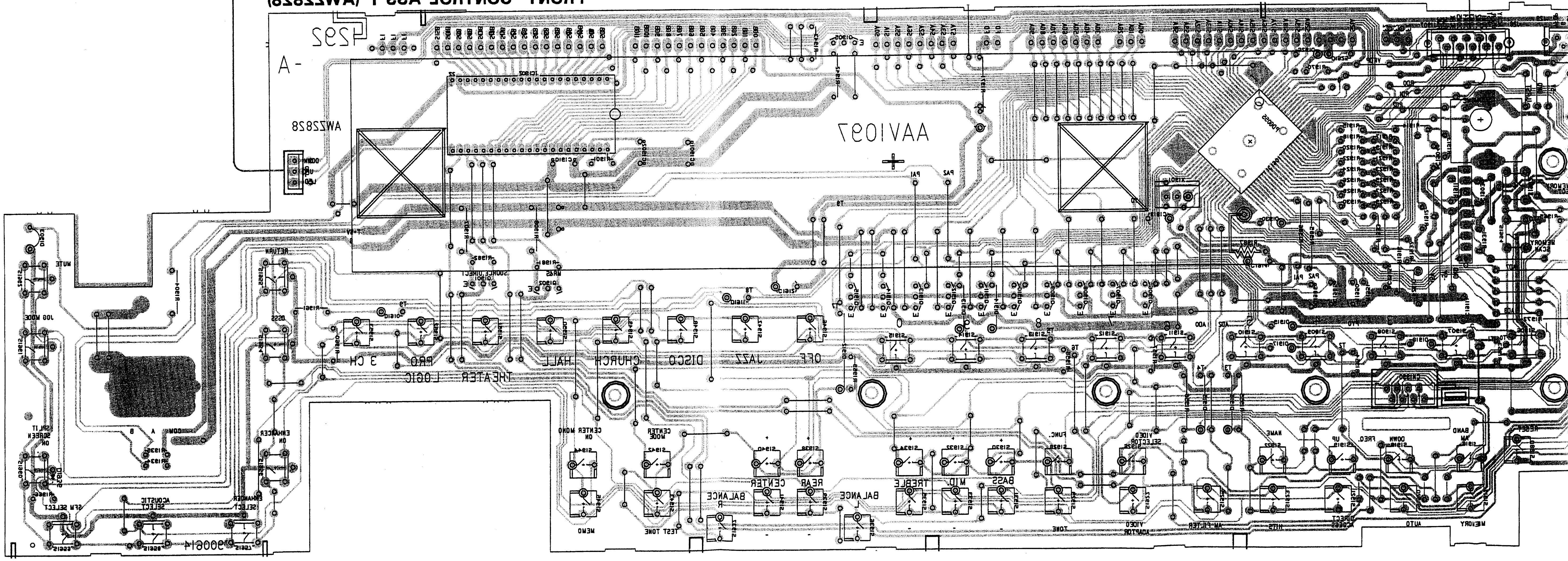
FRONT VIDEO ASS'Y (AWZ2854)


AWZ2854
J27
J26
COM
C.S
Y.S
R1993
R1999
IC1923

To PS.U-COM. Ass'y AWZ2827 CN29
(To page 72)

To PS.U-COM. Ass'y AWZ2827 CN28
(To page 72)

FRONT CONTROL ASS'Y (AWZ2828)


AWZ2828
AAV1097
1292
IC1902
PA1
PA2
MUTE
JOG MODE
SPLIT SCREEN ON
SFM SELECT
ACOUSTIC SELECT
ENHANCER SELECT
ENHANCER ON
RETURN
3 CH
PRO LOGIC
THEATER
HALL
CHURCH
DISCO
JAZZ
OFF
CENTER MODE ON
CENTER MODE
MEMO
TEST TONE
BALANCE R
CENTER
REAR
BALANCE L
TREBLE
MID
BASS
TONE
FUNC.
VIDEO SELECTOR
VIDEO ADAPTOR
AM FILTER
NAME
HITS
UP
FREQ.
DIRECT ACCESS
DOWN
BAND
AM MODE
AUTO
MEMORY
RESET
MEMORY SCAN
SOURCE DIRECT
MRAS

IC1902
Q1902 Q1901

Q1905

Q1906 - Q1915

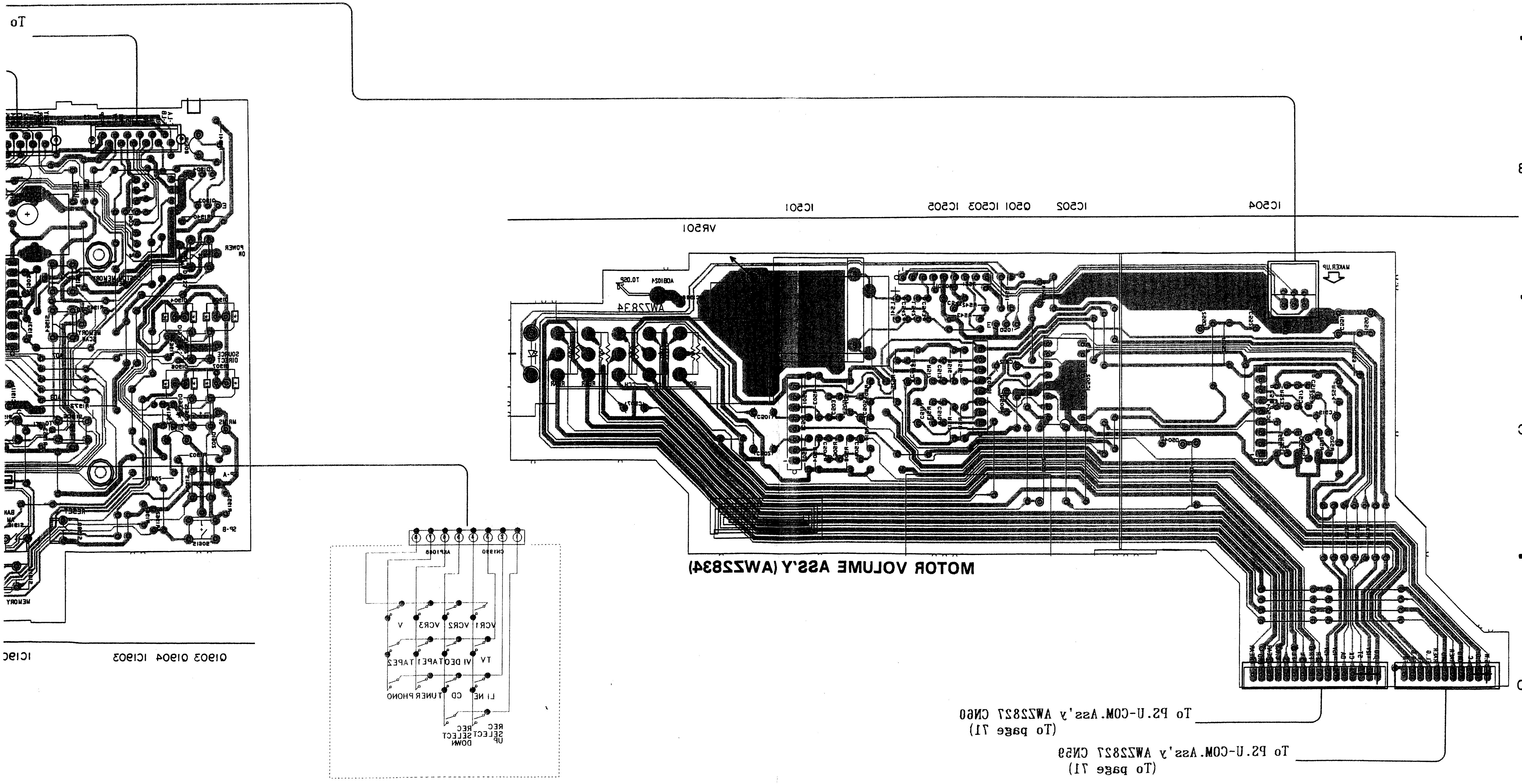
IC1901

IC1904

A B C D

A

B


To
POWER ON
MEMORY SCAN
SOURCE DIRECT
SP-A
SP-B
RESET
MEMORY
IC19C Q1903 Q1904 IC1903
CN1930
ARP1048
VCR1 VCR2 VCR3 V
TV VI DEO TAPE1 TAPE2
LI NE CD TUNER PHONO
REC SELECT UP
REC SELECT DOWN
IC501
Q501 IC503 IC505
IC502
IC504
VR501
AWZ2834
MAKER UP

MOTOR VOLUME ASS'Y (AWZ2834)

DOOR ASS'Y (AAN1220)

To PS.U-COM.Ass'y AWZ2827 CN60
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN59
(To page 71)

C

D

3 2

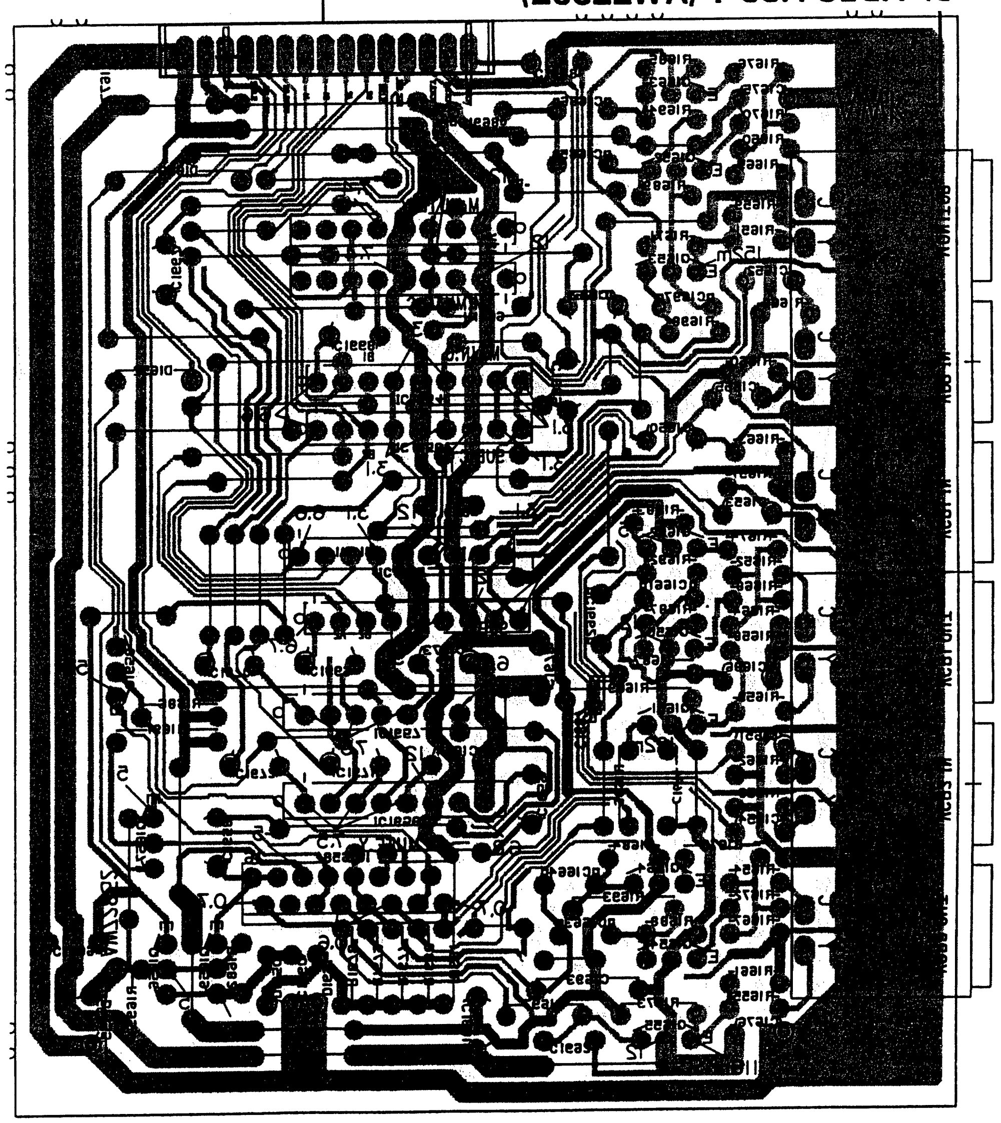
To PS.U-COM.Ass'y AWZ2827 CN56
(To page 72)

S. VIDEO ASS'Y (AWZ2852)

B

C

D



Q1663 Q1652 Q1653
Q1662
Q1650 Q1651
Q1664 Q1654 Q1655

IC1651 IC1653
IC1654 IC1650 IC1652
IC1655 IC1657 IC1656
IC1658

Q1658
Q1659 Q1656 Q1657

3 2 1

3.6 S. VIDEO ASS'Y (AWZ2852)

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

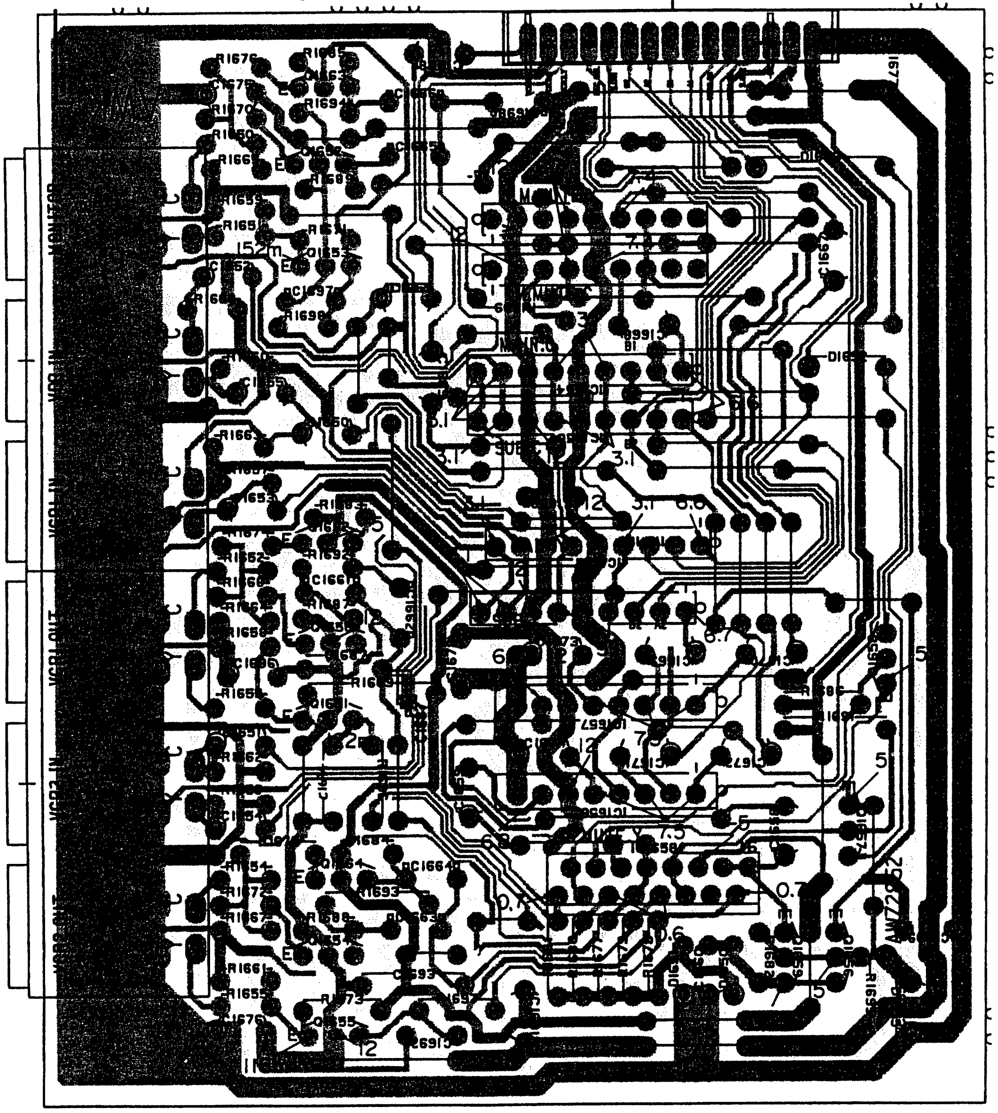
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

To PS.U-COM.Ass'y AWZ2827 CN56
(To page 72)

S. VIDEO ASS'Y (AWZ2852)

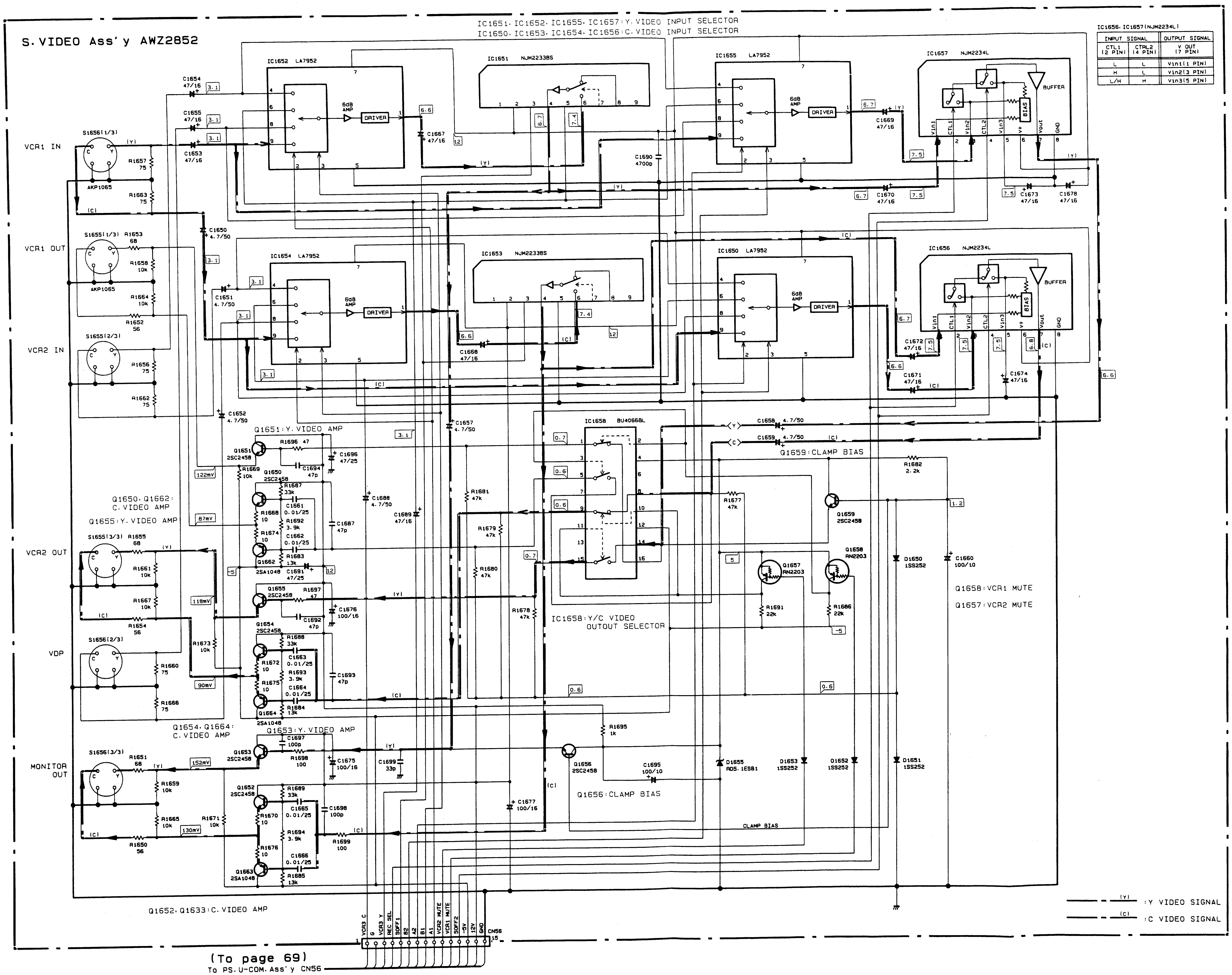


Q1663 Q1652 Q1653
Q1662
Q1650 Q1651
Q1664 Q1654 Q1655

IC1651 IC1653
IC1654 IC1650 IC1652
IC1655 IC1657 IC1656
IC1658

Q1658
Q1659 Q1656 Q1657

S. VIDEO Ass'y AWZ2852


IC1651, IC1652, IC1655, IC1657: Y. VIDEO INPUT SELECTOR
IC1650, IC1653, IC1654, IC1656: C. VIDEO INPUT SELECTOR
IC1652 LA7952
IC1651 NJM2233BS
IC1655 LA7952
IC1657 NJM2234L
IC1654 LA7952
IC1653 NJM2233BS
IC1650 LA7952
IC1656 NJM2234L
IC1658 BU4066BL
6dB AMP
DRIVER
BUFFER
BIAS
Vin1
CTL1
Vin2
CTL2
Vin3
V+
Vout
GND
VCR1 IN
VCR1 OUT
VCR2 IN
VCR2 OUT
VDP
MONITOR OUT
S1656(1/3)
S1655(1/3)
S1655(2/3)
S1655(3/3)
S1656(2/3)
S1656(3/3)
AKP1065
Q1651: Y. VIDEO AMP
Q1650, Q1662: C. VIDEO AMP
Q1655: Y. VIDEO AMP
Q1654, Q1664: C. VIDEO AMP
Q1653: Y. VIDEO AMP
Q1652, Q1633: C. VIDEO AMP
Q1659: CLAMP BIAS
Q1656: CLAMP BIAS
Q1658: VCR1 MUTE
Q1657: VCR2 MUTE
IC1658: Y/C VIDEO OUTOUT SELECTOR
CLAMP BIAS
2SC2458
2SA1048
RN2203
D1650 1SS252
D1651 1SS252
D1652 1SS252
D1653 1SS252
D1655 RD5.1ES81
C1660 100/10
R1682 2.2k
R1677 47k
R1681 47k
R1679 47k
R1680 47k
R1678 47k
R1691 22k
R1686 22k
R1695 1k
C1695 100/10
C1677 100/16
C1688 4.7/50
C1689 47/16
C1657 4.7/50
C1658 4.7/50
C1659 4.7/50
122mV
87mV
118mV
90mV
152mV
130mV
VCR3 C
G
VCR3 Y
REC SEL
SOFF1
B2
A2
B1
A1
VCR2 MUTE
VCR1 MUTE
SOFF2
-5V
12V
GND
CN56
1
15
(Y) : Y VIDEO SIGNAL
(C) : C VIDEO SIGNAL

IC1656, IC1657 (NJM2234L)

INPUT SIGNAL		OUTPUT SIGNAL
CTL1 (2 PIN)	CTRL2 (4 PIN)	V OUT (7 PIN)
L	L	Vin1 (1 PIN)
H	L	Vin2 (3 PIN)
L/H	H	Vin3 (5 PIN)

(To page 69)
To PS. U-COM. Ass'y CN56
AWZ2827

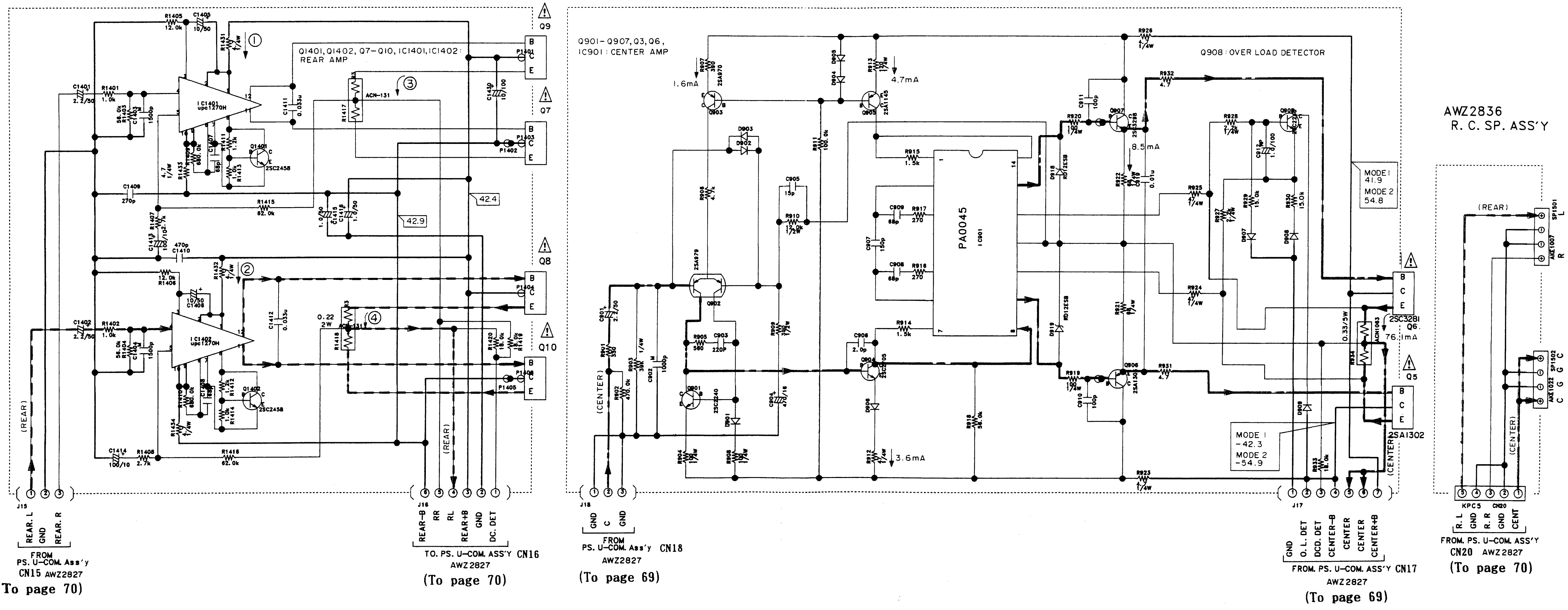
3.7 REAR AMP (AWZ2837), R.C.SPEAKER (AWZ2836) and CENTER AMP ASS'Y (AWZ2829)

REAR

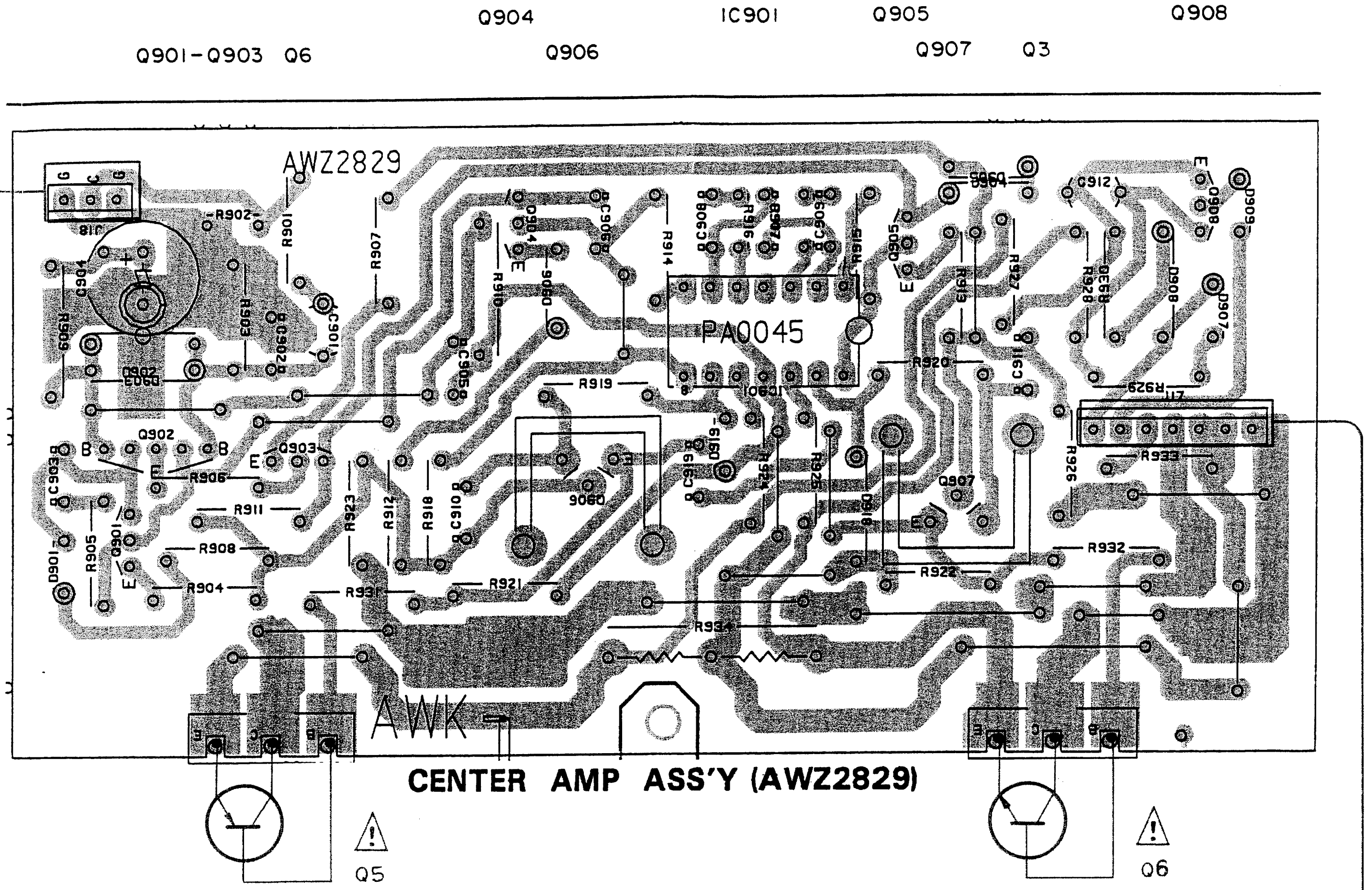
LOAD	CURRENT	
	OPEN	8Ω
①	17.7mA	17.6mA
②	17.5mA	17.2mA
③	1.1mA	0.8mA
④	0.6mA	0.2mA

AWZ2837
R. AMP. ASS'Y

AWZ2829
C. AMP. ASS'Y


Q1401, Q1402, Q7–Q10, IC1401, IC1402 : REAR AMP
IC1401 uPC1270H
IC1402 uPC1270H
2SC2458
ACN-131
Q9
Q7
Q8
Q10
42.4
42.9
0.22 2W
(REAR)
J15
REAR. L
GND
REAR. R
FROM PS. U-COM. Ass'y CN15 AWZ2827
(To page 70)
J16
REAR-B
RR
RL
REAR+B
GND
DC. DET
TO. PS. U-COM. ASS'Y CN16 AWZ2827
(To page 70)
Q901–Q907, Q3, Q6, IC901 : CENTER AMP
Q908 : OVER LOAD DETECTOR
1.6mA
4.7mA
8.5mA
3.6mA
2SA970
2SA1145
2SA979
2SC2240
2SC2705
2SC3298
2SA1306
PA0045 IC901
MODE 1 41.9
MODE 2 54.8
MODE 1 -42.3
MODE 2 -54.9
2SC3281 Q6
76.1mA
Q5
2SA1302
0.33/5W
ACN1063
(CENTER)
J18
GND
C
GND
FROM PS. U-COM. Ass'y CN18 AWZ2827
(To page 69)
J17
GND
O. L. DET
DCD. DET
CENTER-B
CENTER
CENTER
CENTER+B
FROM. PS. U-COM. ASS'Y CN17 AWZ2827
(To page 69)
AWZ2836
R. C. SP. ASS'Y
(REAR)
SP1501
AKE1007
L
R
REAR
SP1502
AKE1022
C G G C
CENTER SPEAKER
KPC5 CN20
R. L
GND
R. R
GND
CENT
FROM. PS. U-COM. ASS'Y CN20 AWZ2827
(To page 70)

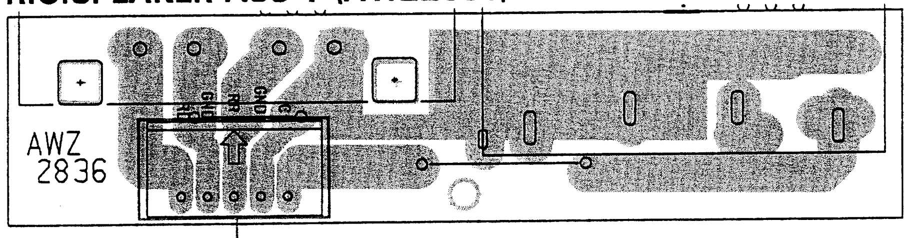
From PS.U-COM.Ass'y AWZ2827 CN18
(To page 72)



CENTER AMP ASS'Y (AWZ2829)

From PS.U-COM.Ass'y AWZ2827 CN17
(To page 72)

R.C.SPEAKER ASS'Y (AWZ2836)

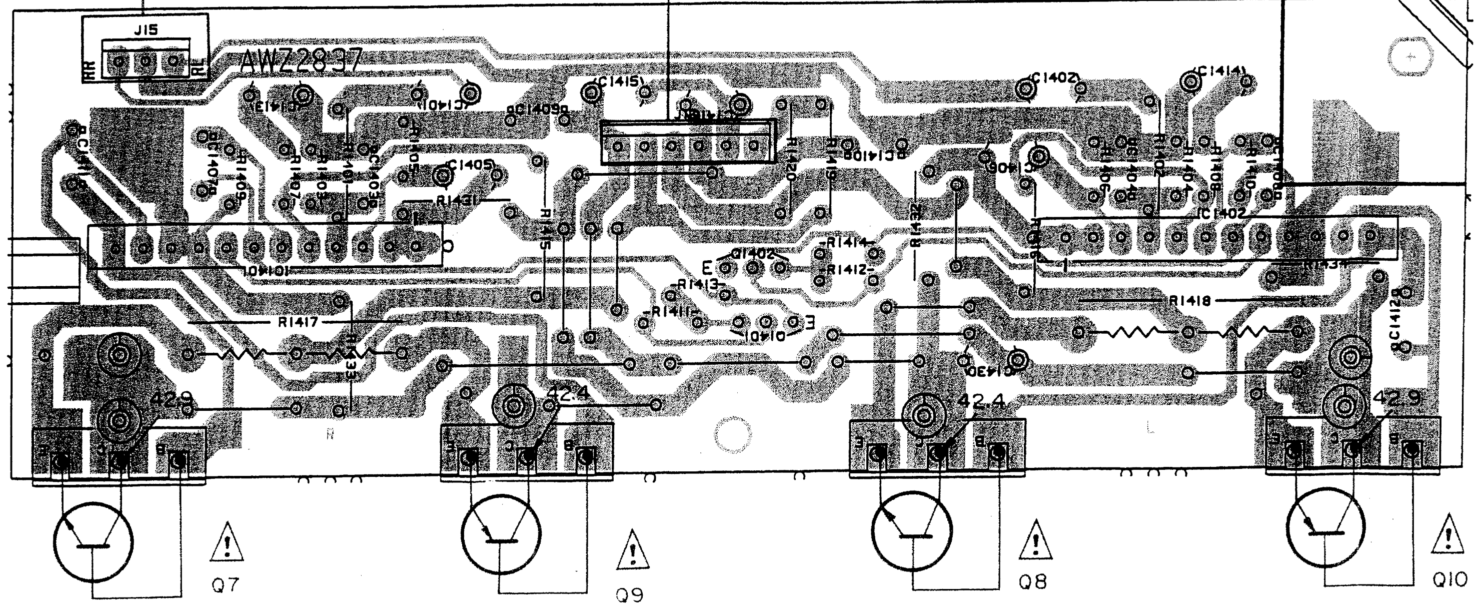


From PS.U-COM.Ass'y AWZ2827 J20
(To page 73)

From PS.U-COM.Ass'y AWZ2827 CN15
(To page 72)

From PS.U-COM.Ass'y AWZ2827 CN16
(To page 72)

REAR AMP ASS'Y (AWZ2837)



NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

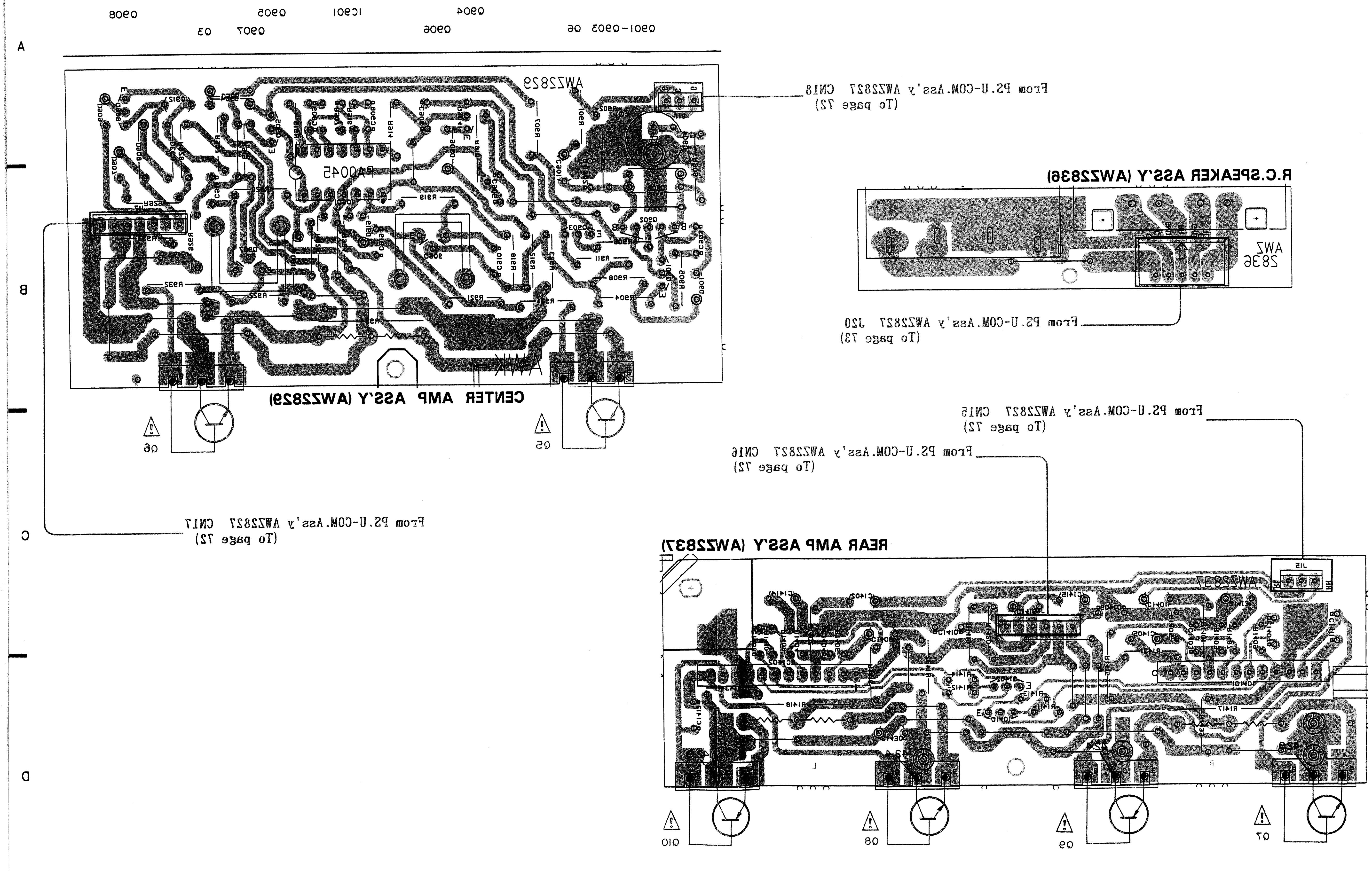
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
E Q504	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

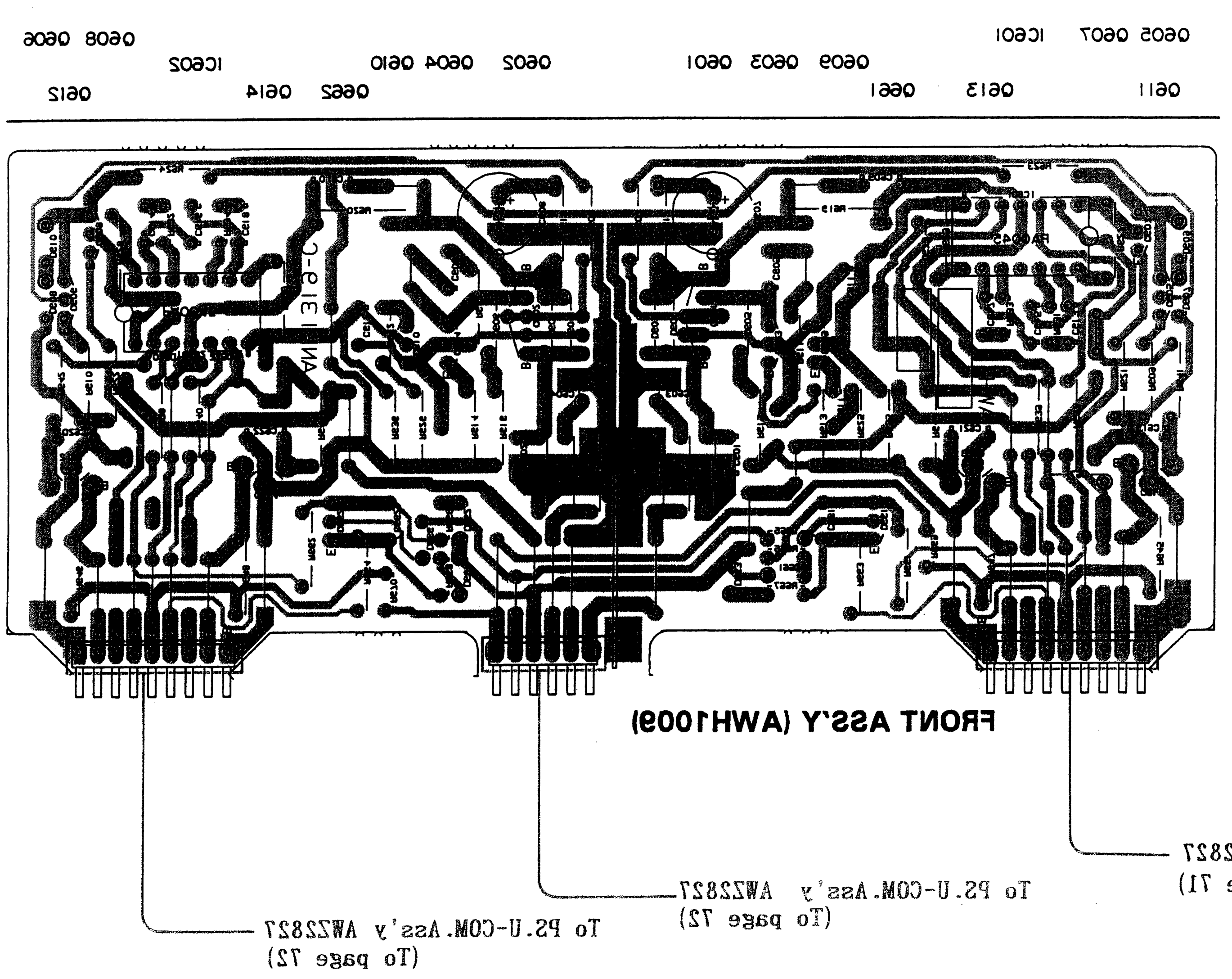
This P.C.B. connection diagram is viewed from the foil side.


6
5
4
3
2
1
A
B
C
D
Q908
Q905
IC901
Q904
Q907 Q3
Q906
Q901–Q903 Q6
AWZ2829
PA0045
From PS.U-COM.Ass'y AWZ2827 CN18
(To page 72)
From PS.U-COM.Ass'y AWZ2827 CN17
(To page 72)
Q6
Q5
AWZ
2836
From PS.U-COM.Ass'y AWZ2827 J20
(To page 73)
From PS.U-COM.Ass'y AWZ2827 CN15
(To page 72)
From PS.U-COM.Ass'y AWZ2827 CN16
(To page 72)
AWZ2837
J15
Q10
Q8
Q9
Q7

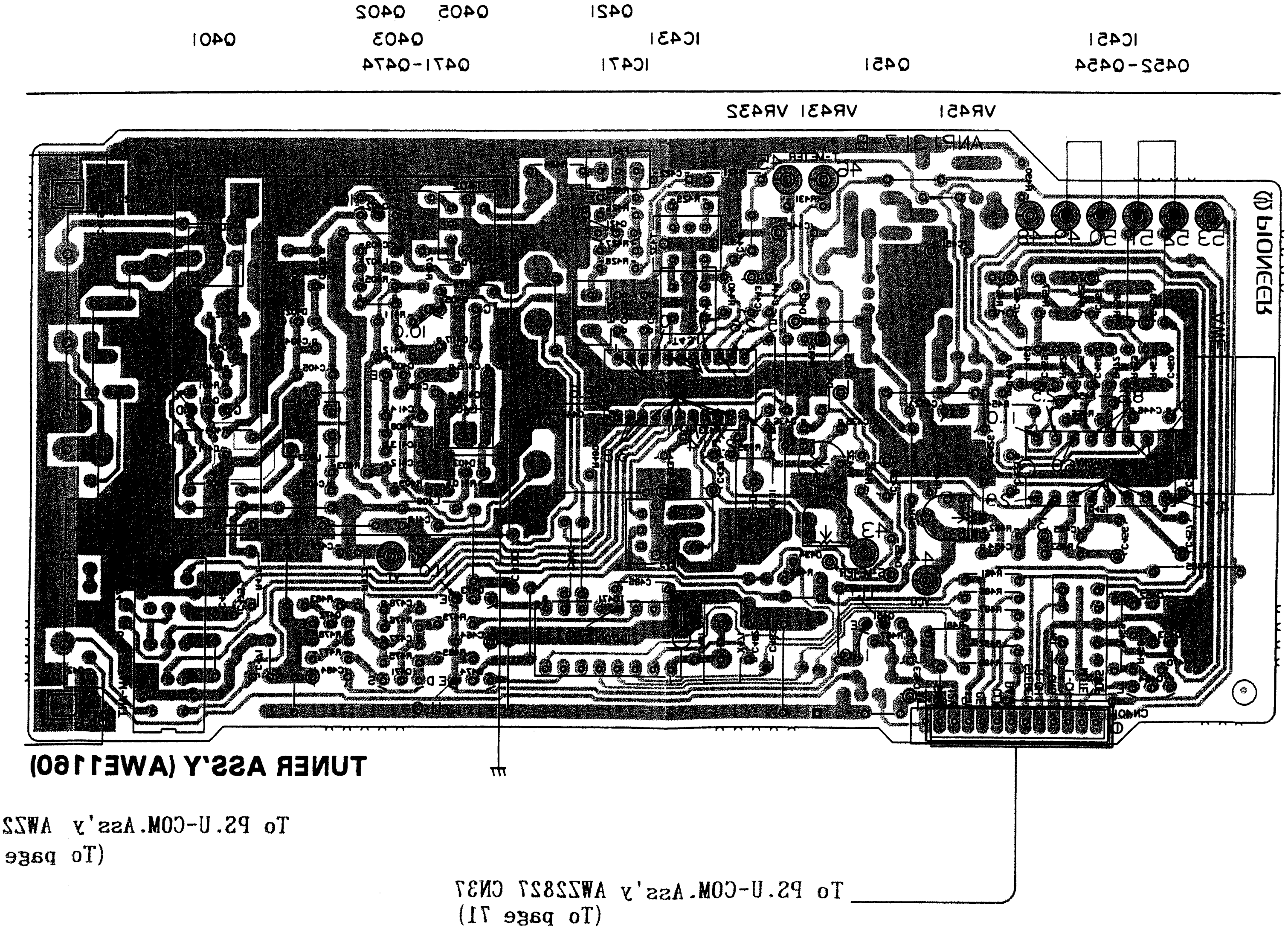
CENTER AMP ASS'Y (AWZ2829)

R.C.SPEAKER ASS'Y (AWZ2836)

REAR AMP ASS'Y (AWZ2837)


Q605 Q607 IC601
Q609 Q603 Q601
Q602 Q604 Q610
IC602
Q608 Q606
Q611
Q613
Q661
Q662 Q614
Q612
To PS.U-COM.Ass'y AWZ2827
(To page 71)
To PS.U-COM.Ass'y AWZ2827
(To page 72)
To PS.U-COM.Ass'y AWZ2827
(To page 72)

FRONT ASS'Y (AWH1009)

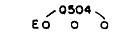
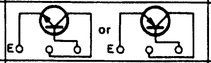
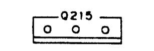
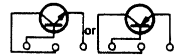
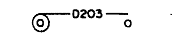
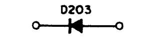
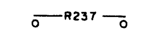
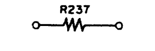
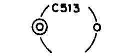
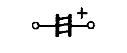
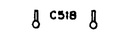
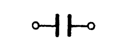

Q402 Q405 Q421
Q401 Q403 IC431 IC451
Q471-Q474 IC471 Q451 Q452-Q454
VR432 VR431 VR451
ANP1317-B
PIONEER
To PS.U-COM.Ass'y AWZ2827 CN37
(To page 71)

TUNER ASS'Y (AWE1160)

3.8 TUNER (AWE1160) and FRONT ASS'Y (AWH1009)

NOTE

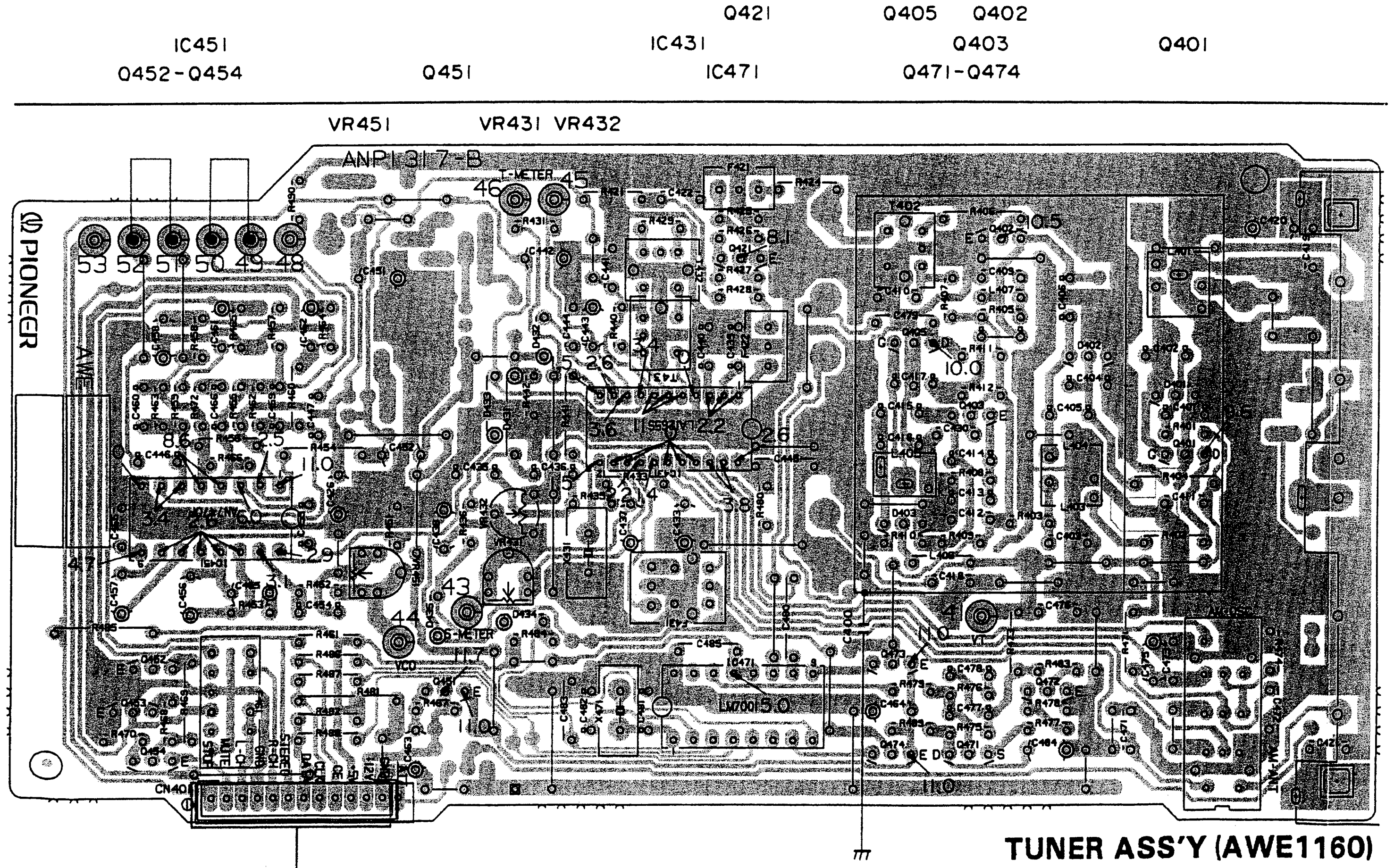
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarity)
		Capacitor (Non-polarity)

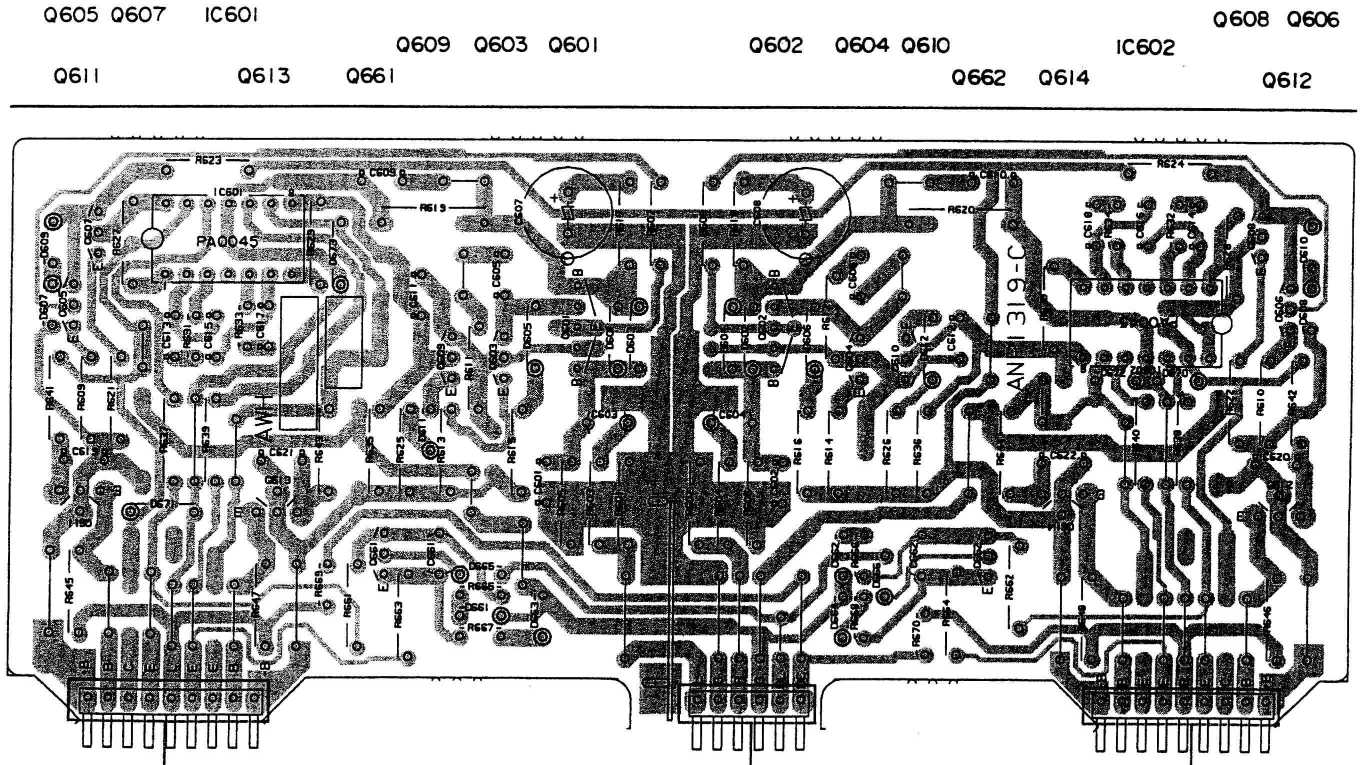
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


IC451
Q452-Q454
Q451
IC431
Q421
IC471
Q405 Q402
Q403
Q471-Q474
Q401
VR451
VR431 VR432
ANP1317-B
PIONEER
AWE
53 52 51 50 49 48
T-METER
S-METER
VCO
CN401

TUNER ASS'Y (AWE1160)


Q605 Q607
IC601
Q611
Q613
Q661
Q609 Q603 Q601
Q602 Q604 Q610
Q662 Q614
IC602
Q608 Q606
Q612
PA0045
ANP1319-C

FRONT ASS'Y (AWH1009)

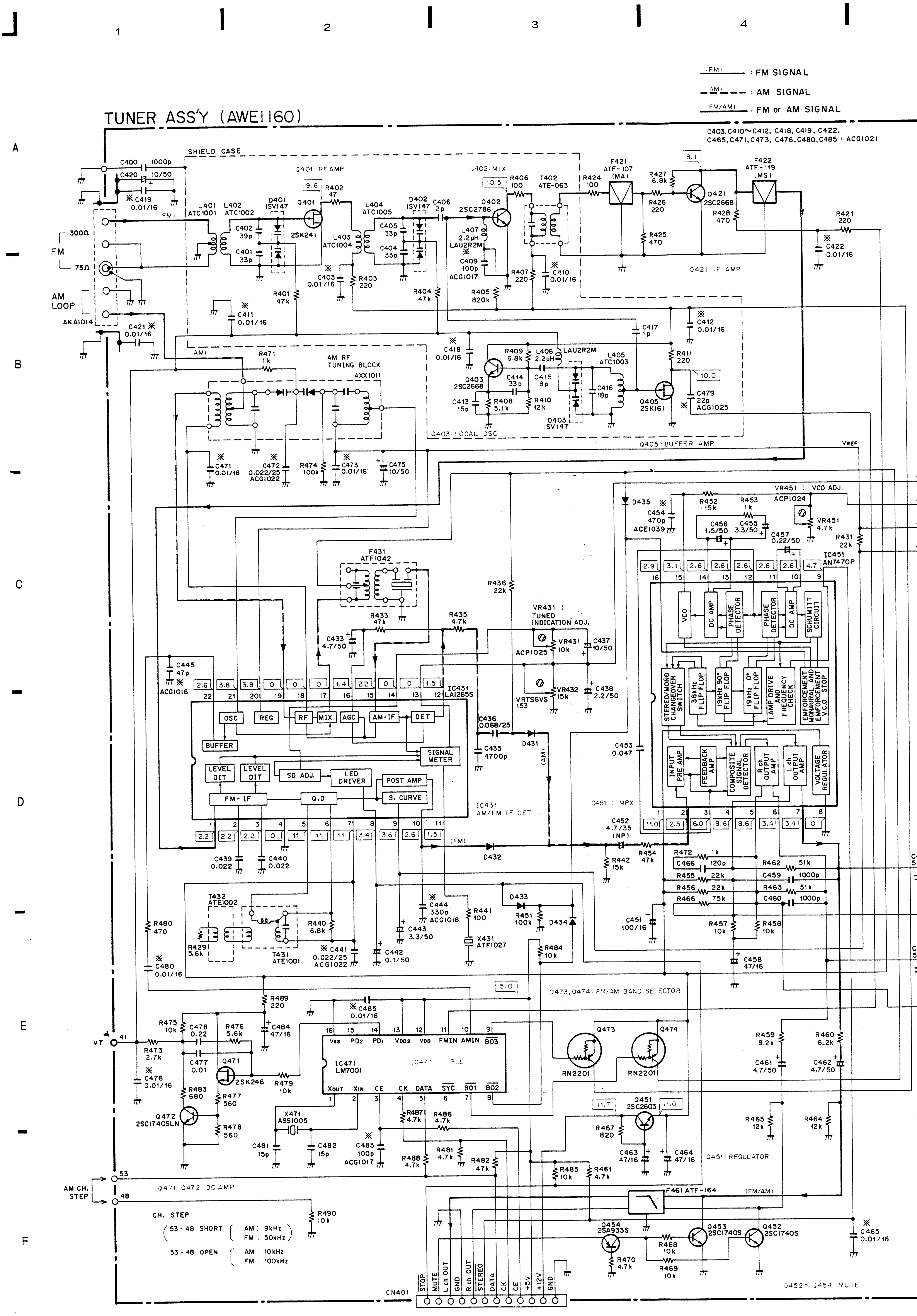
To PS.U-COM.Ass'y AWZ2827 CN37
(To page 71)

To PS.U-COM.Ass'y AWZ2827
(To page 71)

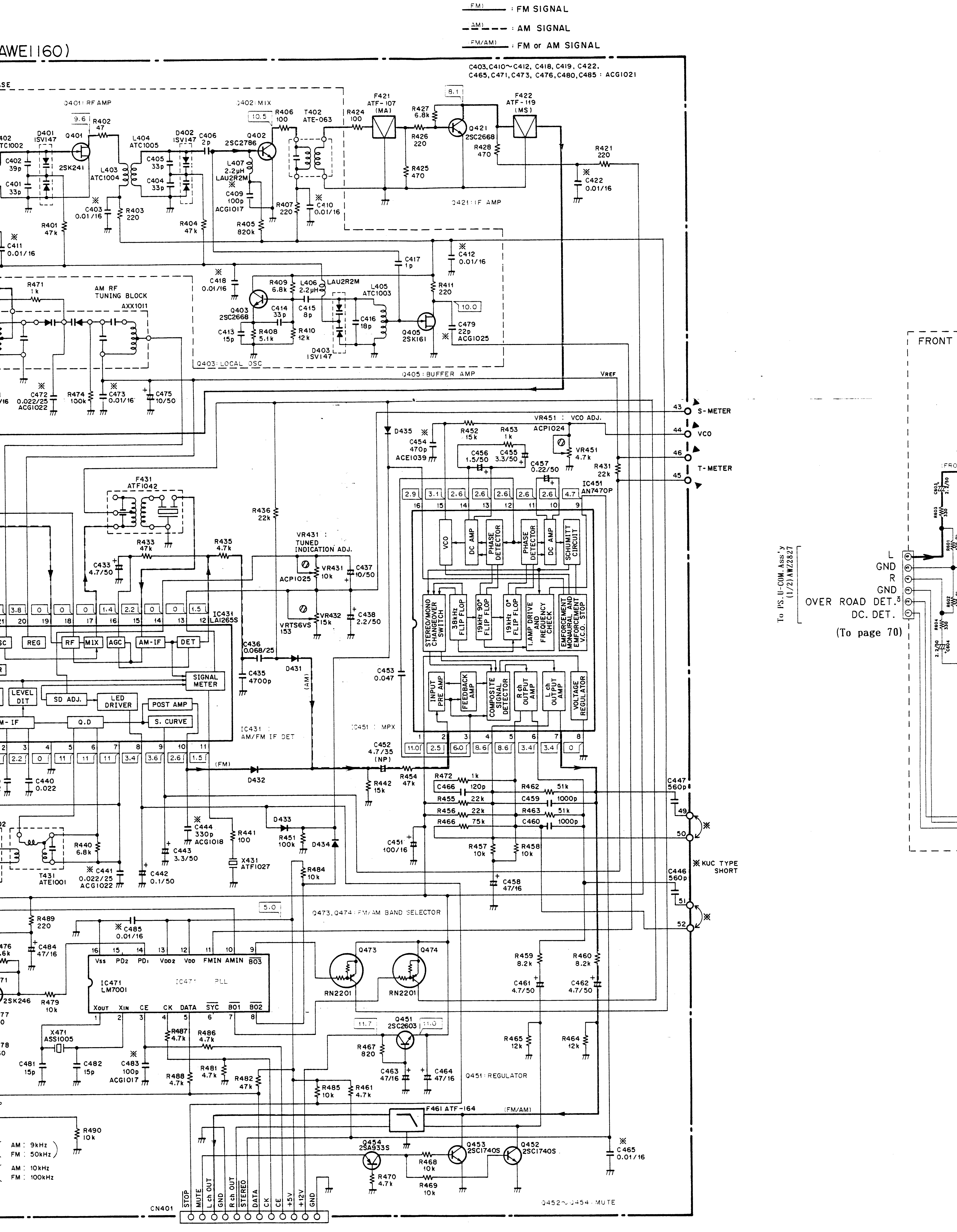
To PS.U-COM.Ass'y AWZ2827
(To page 72)

To PS.U-COM.Ass'y AWZ2827
(To page 72)

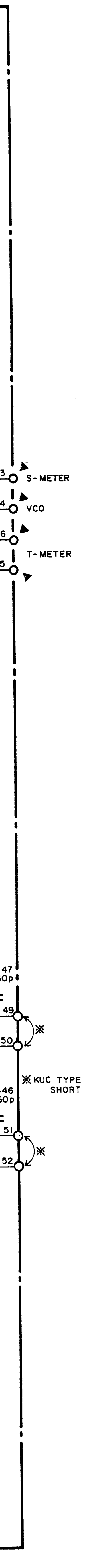
TUNER ASS'Y (AWE1160)

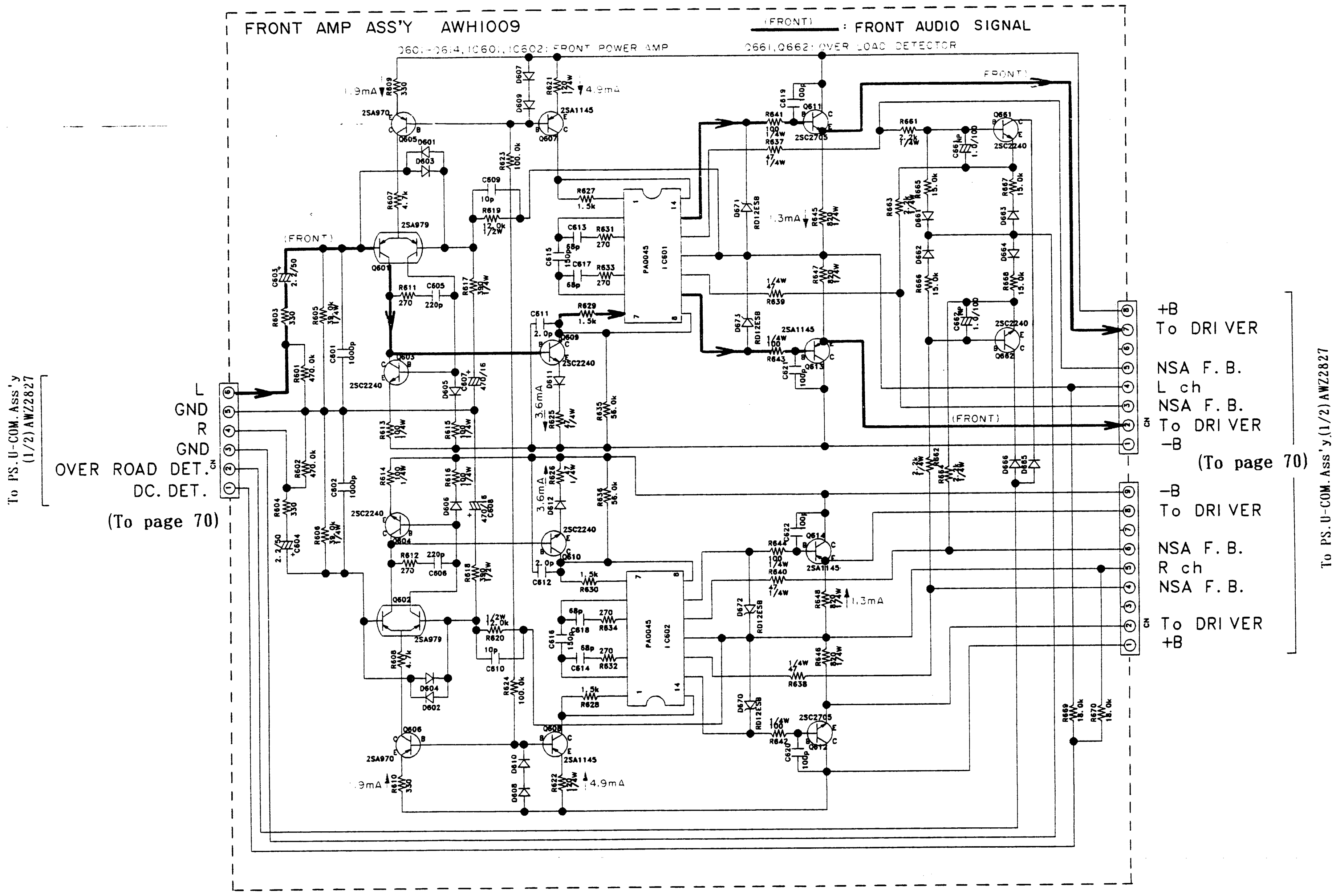

1
2
3
4
A
B
C
D
E
F
FM : FM SIGNAL
AM : AM SIGNAL
FM/AM : FM or AM SIGNAL
C403, C410~C412, C418, C419, C422, C465, C471, C473, C476, C480, C485 : ACG1021
SHIELD CASE
C400 1000p
C420 10/50
C419 0.01/16
FM 300Ω 75Ω
AM LOOP
AKA1014
C421 0.01/16
L401 ATC1001
L402 ATC1002
C402 39p
C401 33p
D401 1SV147
Q401 2SK241
Q401 : RF AMP
R402 47
9.6
R401 47k
C411 0.01/16
L404 ATC1005
L403 ATC1004
C405 33p
C404 33p
D402 1SV147
C403 0.01/16
R403 220
R404 47k
C406 2p
Q402 : MIX
Q402 2SC2786
R406 100
10.5
L407 2.2μH LAU2R2M
C409 100p ACG1017
R405 820k
R407 220
T402 ATE-063
C410 0.01/16
R424 100
F421 ATF-107 (MA)
R427 6.8k
R426 220
R425 470
8.1
Q421 2SC2668
R428 470
Q421 : IF AMP
F422 ATF-119 (MS)
R421 220
C422 0.01/16
C412 0.01/16
C417 1p
C418 0.01/16
R409 6.8k
L406 2.2μH LAU2R2M
Q403 2SC2668
C414 33p
C415 8p
L405 ATC1003
R411 220
10.0
C416 18p
C413 15p
R408 5.1k
R410 12k
D403 1SV147
Q405 2SK161
C479 22p ACG1025
Q403 : LOCAL OSC
Q405 : BUFFER AMP
AM
R471 1k
AM RF TUNING BLOCK AXX1011
C471 0.01/16
C472 0.022/25 ACG1022
R474 100k
C473 0.01/16
C475 10/50
VREF
D435
C454 470p ACE1039
R452 15k
R453 1k
VR451 : VCO ADJ. ACP1024
VR451 4.7k
C456 1.5/50
C455 3.3/50
C457 0.22/50
R431 22k
IC451 AN7470P
2.9 3.1 2.6 2.6 2.6 2.6 2.6 4.7
16 15 14 13 12 11 10 9
VCO
DC AMP
PHASE DETECTOR
PHASE DETECTOR
DC AMP
SCHUMITT CIRCUIT
STEREO/MONO CHANGEOVER SWITCH
38kHz FLIP FLOP
19kHz 90° FLIP FLOP
19kHz 0° FLIP FLOP
LAMP DRIVE AND FREQUENCY CHECK
ENFORCEMENT MONAURAL AND ENFORCEMENT V.C.O. STOP
INPUT PRE AMP
FEEDBACK AMP
COMPOSITE SIGNAL DETECTOR
R ch OUTPUT AMP
L ch OUTPUT AMP
VOLTAGE REGULATOR
1 2 3 4 5 6 7 8
11.0 2.5 6.0 8.6 8.6 3.4 3.4 0
IC451 : MPX
F431 ATF1042
R436 22k
VR431 : TUNED INDICATION ADJ.
VR431 10k
ACP1025
C437 10/50
VR432 15k
VRTS6VS 153
C438 2.2/50
R433 47k
C433 4.7/50
R435 4.7k
C445 47p ACG1016
2.6 3.8 3.8 0 0 0 1.4 2.2 0 0 1.5
22 21 20 19 18 17 16 15 14 13 12
IC431 LA1265S
OSC
REG
RF
MIX
AGC
AM-IF
DET
BUFFER
SIGNAL METER
LEVEL DIT
LEVEL DIT
SD ADJ.
LED DRIVER
POST AMP
FM-IF
Q.D
S. CURVE
1 2 3 4 5 6 7 8 9 10 11
2.2 2.2 2.2 0 11 11 11 3.4 3.6 2.6 1.5
IC431 : AM/FM IF DET
C436 0.068/25
C435 4700p
D431
(AM)
C453 0.047
(FM)
D432
C452 4.7/35 (NP)
R442 15k
R454 47k
R472 1k
C466 120p
R462 51k
R455 22k
C459 1000p
R456 22k
R463 51k
R466 75k
C460 1000p
C439 0.022
C440 0.022
T432 ATE1002
R429 5.6k
T431 ATE1001
R440 6.8k
C441 0.022/25 ACG1022
C442 0.1/50
C443 3.3/50
C444 330p ACG1018
R441 100
X431 ATF1027
D433
R451 100k
D434
R484 10k
C451 100/16
R457 10k
R458 10k
C458 47/16
R480 470
C480 0.01/16
5.0
Q473, Q474 : FM/AM BAND SELECTOR
R489 220
C485 0.01/16
C484 47/16
R475 10k
C478 0.22
R476 5.6k
VT 41
R473 2.7k
C477 0.01
Q471 2SK246
R479 10k
C476 0.01/16
R483 680
R477 560
Q472 2SC1740SLN
R478 560
16 15 14 13 12 11 10 9
Vss PD2 PD1 VDD2 VDD FMIN AMIN B03
IC471 LM7001
IC471 : PLL
XOUT XIN CE CK DATA SYC B01 B02
1 2 3 4 5 6 7 8
X471 ASS1005
C481 15p
C482 15p
C483 100p ACG1017
R487 4.7k
R486 4.7k
R481 4.7k
R488 4.7k
R482 47k
Q473 RN2201
Q474 RN2201
R459 8.2k
R460 8.2k
C461 4.7/50
C462 4.7/50
11.7
Q451 2SC2603
11.0
R467 820
C463 47/16
C464 47/16
Q451 : REGULATOR
R465 12k
R464 12k
R485 10k
R461 4.7k
53
AM CH. STEP
48
Q471, Q472 : DC AMP
F461 ATF-164
(FM/AM)
R490 10k
CH. STEP
53-48 SHORT (AM : 9kHz FM : 50kHz)
53-48 OPEN (AM : 10kHz FM : 100kHz)
Q454 2SA933S
Q453 2SC1740S
Q452 2SC1740S
R468 10k
R469 10k
R470 4.7k
C465 0.01/16
Q452~Q454 : MUTE
CN401
STOP
MUTE
L ch OUT
GND
R ch OUT
STEREO
DATA
CK
CE
+5V
+12V
GND

To PS.U-COM.Ass'y(1/2)AWZ2827 CN37 (To page 68)

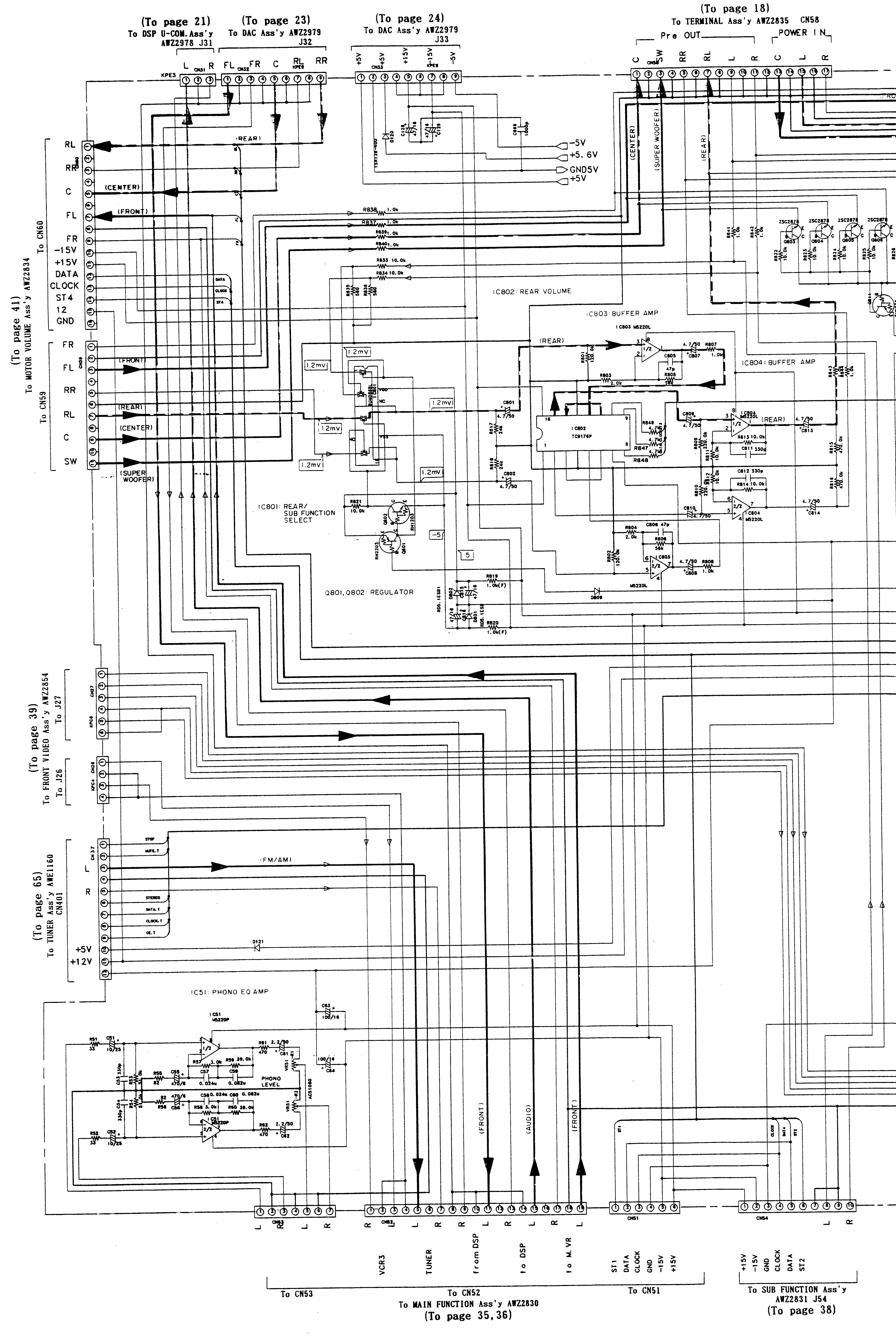

FM : FM SIGNAL
AM : AM SIGNAL
FM/AM : FM or AM SIGNAL
AWE1160)
C403,C410~C412, C418, C419, C422, C465,C471,C473, C476,C480,C485 : ACG1021
Q401 : RF AMP
Q402 : MIX
Q421 : IF AMP
F421 ATF-107 (MA)
F422 ATF-119 (MS)
T402 ATE-063
R402 47
R406 100
R424 100
R427 6.8k
R426 220
R425 470
R428 470
R421 220
C422 0.01/16
Q421 2SC2668
Q402 2SC2786
Q401 2SK241
D401 1SV147
D402 1SV147
L404 ATC1005
L403 ATC1004
L407 2.2μH LAU2R2M
C406 2p
C402 39p
C401 33p
C405 33p
C404 33p
C409 100p ACG1017
C403 0.01/16
R403 220
R401 47k
R404 47k
R405 820k
R407 220
C410 0.01/16
C411 0.01/16
C412 0.01/16
C417 1p
C418 0.01/16
R411 220
R409 6.8k
L406 2.2μH LAU2R2M
L405 ATC1003
Q403 2SC2668
C414 33p
C415 8p
C416 18p
C413 15p
R408 5.1k
R410 12k
D403 1SV147
Q405 2SK161
C479 22p ACG1025
Q403 : LOCAL OSC
Q405 : BUFFER AMP
AM RF TUNING BLOCK AXX1011
R471 1k
C472 0.022/25 ACG1022
R474 100k
C473 0.01/16
C475 10/50
VREF
S-METER
VCO
T-METER
43 44 46 45
VR451 : VCO ADJ.
ACP1024
VR451 4.7k
R452 15k
R453 1k
D435
C454 470p ACE1039
C456 1.5/50
C455 3.3/50
C457 0.22/50
R431 22k
IC451 AN7470P
VCO
DC AMP
PHASE DETECTOR
SCHMITT CIRCUIT
STEREO/MONO CHANGEOVER SWITCH
38kHz FLIP FLOP
19kHz 90° FLIP FLOP
19kHz 0° FLIP FLOP
LAMP DRIVE AND FREQUENCY CHECK
ENFORCEMENT MONAURAL AND ENFORCEMENT V.C.O. STOP
INPUT PRE AMP
FEEDBACK AMP
COMPOSITE SIGNAL DETECTOR
R ch OUTPUT AMP
L ch OUTPUT AMP
VOLTAGE REGULATOR
IC451 : MPX
F431 ATF1042
R436 22k
R433 47k
R435 4.7k
C433 4.7/50
VR431 : TUNED INDICATION ADJ.
ACP1025
VR431 10k
VR432 15k
VRTS6VS 153
C437 10/50
C438 2.2/50
IC431 LA1265S
REG
RF
MIX
AGC
AM-IF
DET
SIGNAL METER
LEVEL DIT
SD ADJ.
LED DRIVER
POST AMP
S. CURVE
Q.D
IC431 : AM/FM IF DET
C436 0.068/25
C435 4700p
D431
(AM)
(FM)
D432
C453 0.047
C452 4.7/35 (NP)
R454 47k
R442 15k
C440 0.022
D433
R451 100k
D434
C444 330p ACG1018
R441 100
C443 3.3/50
X431 ATF1027
R440 6.8k
C441 0.022/25 ACG1022
C442 0.1/50
T431 ATE1001
R484 10k
C451 100/16
R472 1k
C466 120p
R455 22k
R456 22k
R466 75k
R462 51k
C459 1000p
R463 51k
C460 1000p
R457 10k
R458 10k
C458 47/16
C447 560p
C446 560p
49 50 51 52
※KUC TYPE SHORT
Q473, Q474 : FM/AM BAND SELECTOR
R489 220
C485 0.01/16
C484 47/16
IC471 LM7001
IC471 PLL
Vss PD2 PD1 VDD2 VDD FMIN AMIN BO3
XOUT XIN CE CK DATA SYC BO1 BO2
Q473 RN2201
Q474 RN2201
2SK246
R479 10k
X471 ASS1005
C481 15p
C482 15p
C483 100p ACG1017
R487 4.7k
R486 4.7k
R481 4.7k
R488 4.7k
R482 47k
R459 8.2k
R460 8.2k
C461 4.7/50
C462 4.7/50
Q451 2SC2603
R467 820
C463 47/16
C464 47/16
Q451 : REGULATOR
R465 12k
R464 12k
R485 10k
R461 4.7k
F461 ATF-164
(FM/AM)
R490 10k
AM : 9kHz
FM : 50kHz
AM : 10kHz
FM : 100kHz
Q454 2SA933S
Q453 2SC1740S
Q452 2SC1740S
R468 10k
R469 10k
R470 4.7k
C465 0.01/16
Q452~Q454 : MUTE
CN401
STOP MUTE L ch OUT GND R ch OUT STEREO DATA CK CE +5V +12V GND
FRONT
L GND R GND OVER ROAD DET. DC. DET.
To PS.U-COM.Ass'y (1/2) AWZ2827
(To page 70)
9.6 10.5 8.1 10.0 11.7 11.0 5.0
2.9 3.1 2.6 2.6 2.6 2.6 2.6 4.7
11.0 2.5 6.0 8.6 8.6 3.4 3.4 0
3.8 0 0 0 1.4 2.2 0 0 1.5
2.2 0 11 11 11 3.4 3.6 2.6 1.5

To PS.U-COM.Ass'y(1/2)AWZ2827 CN37 (To page 68)

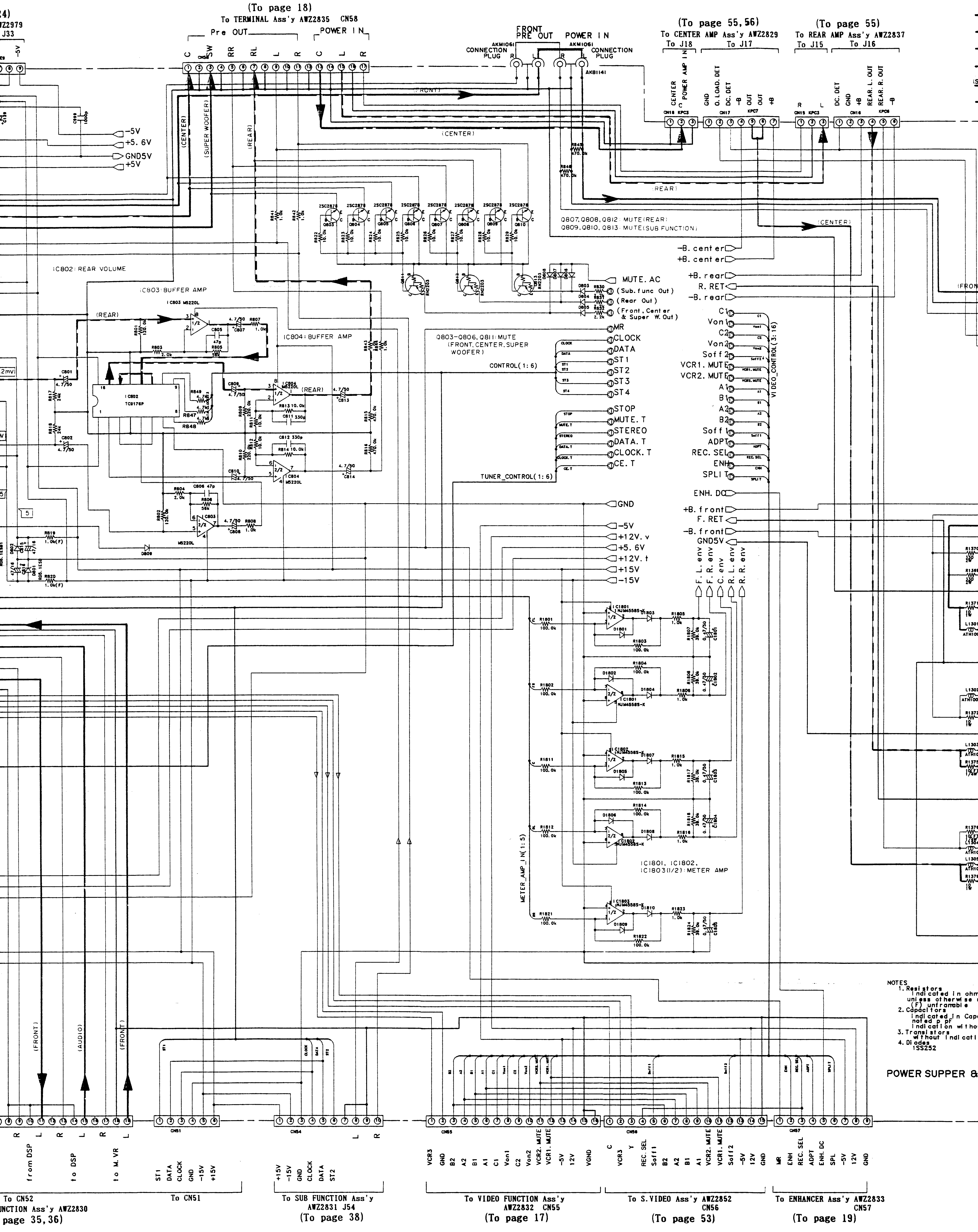

3
S-METER
4
VCO
6
T-METER
5
47
50p
49
50
※
46
50p
※KUC TYPE SHORT
51
52
※


FRONT AMP ASS'Y AWH1009
(FRONT) : FRONT AUDIO SIGNAL
Q601-Q614, IC601, IC602: FRONT POWER AMP
Q661, Q662: OVER LOAD DETECTOR
To PS.U-COM.Ass'y (1/2) AWZ2827
L
GND
R
GND
OVER ROAD DET.
DC. DET.
CN
(To page 70)
+B
To DRIVER
NSA F.B.
L ch
NSA F.B.
To DRIVER
-B
(To page 70)
-B
To DRIVER
NSA F.B.
R ch
NSA F.B.
To DRIVER
+B
To PS.U-COM.Ass'y (1/2) AWZ2827
PA0045
IC601
IC602
2SA970
2SA1145
2SA979
2SC2240
2SC2705
1.9mA
4.9mA
3.6mA
1.3mA
(FRONT)

3.9 POWER SUPPLY & U－COM (AWZ2827), HEAD PHONE (AWZ2838), POWER SUPPLY & CAPACITOR (AWZ2894), TRANS TERMINAL (AWZ2893), POWER SUPPLY 1 (AWZ2853) and POWER SUPPLY 2 ASS'Y (AWZ3052)

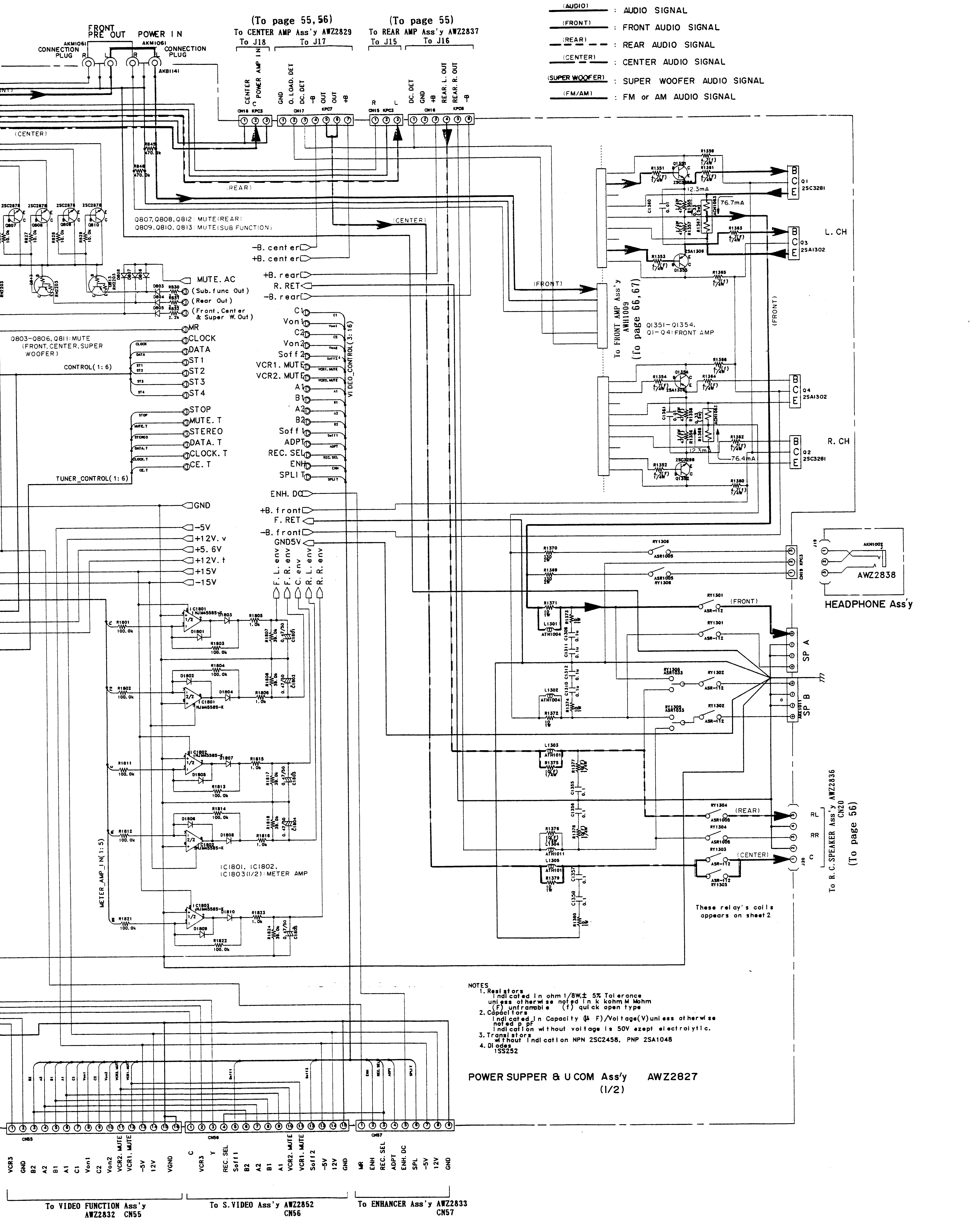

(To page 21)
To DSP U-COM. Ass'y AWZ2978 J31
L CN31 R
KPE3
(To page 23)
To DAC Ass'y AWZ2979 J32
FL CN32 FR C RL RR
KPE9
(To page 24)
To DAC Ass'y AWZ2979 J33
+5V CN33 +5V +15V -15V -5V
KPE9
(To page 18)
To TERMINAL Ass'y AWZ2835 CN58
Pre OUT
POWER IN
C SW RR RL L R C L R
-5V
+5.6V
GND5V
+5V
C128 47/16
C129 47/16
D120
C999 1000p
(CENTER)
(SUPER WOOFER)
(REAR)
(FRONT)
RL RR C FL FR -15V +15V DATA CLOCK ST4 12 GND
CN60
To CN60
(To page 41)
To MOTOR VOLUME Ass'y AWZ2834
FR FL RR RL C SW
CN59
To CN59
(SUPER WOOFER)
DATA
CLOCK
ST4
R838 1.0k
R837 1.0k
R839 1.0k
R840 1.0k
R833 10.0k
R834 10.0k
R835 560
R836 560
IC802: REAR VOLUME
IC803: BUFFER AMP
IC803 M5220L
IC804: BUFFER AMP
1.2mV
VDD
NC
VSS
C801 4.7/50
R817 24k
R818 24k
C802 4.7/50
IC802 TC9176P
R801 120.0k
R803 2.0k
C805 47p
R805 56k
C807 4.7/50
R807 1.0k
R849
R847
R848
C809 4.7/50
IC804 M5220L
R813 10.0k
C811 330p
C812 330p
R814 10.0k
C813 4.7/50
C814 4.7/50
C810 4.7/50
R809
R810
R811
R812
R815
R816
R843
R844
R841 1.0k
R842 1.0k
2SC2878
Q803 Q804 Q805 Q806
R822 R823 R824 R825
Q811
IC801: REAR/ SUB FUNCTION SELECT
R821 10.0k
Q802
Q801
RN1203
RN2203
-5
5
Q801, Q802: REGULATOR
R804 2.0k
C806 47p
R806 56k
R802 120.0k
IC803 2/2
C808 4.7/50
R808 1.0k
M5220L
D809
R819 1.0k(F)
R820 1.0k(F)
C802 47/16
C801 47/16
RD5.1ESB1
D802
D801
CN27
KPC6
To J27
(To page 39)
To FRONT VIDEO Ass'y AWZ2854
CN26
KPC4
To J26
CN37
STOP
MUTE.T
L
R
STEREO
DATA.T
CLOCK.T
CE.T
+5V
+12V
(FM/AM)
D121
(To page 65)
To TUNER Ass'y AWE1160 CN401
IC51: PHONO EQ AMP
IC51 M5220P
C63 100/16
C64 100/16
R51 33
C51 10/25
R52 33
C52 10/25
C53 330p
C54 330p
R53
R54
R55 82
R56 82
C55 470/6
C56 470/6
R57 3.0k
R58 3.0k
R59 39.0k
R60 39.0k
C57 0.024u
C58 0.024u
C59 0.082u
C60 0.082u
R61 470
R62 470
C61 2.2/50
C62 2.2/50
VR51
PHONO LEVEL
ACS1060
(FRONT)
(AUDIO)
(FRONT)
ST1
CLOCK
ST2
CN53
L R L R
CN52
R L R L R L R L R L R
CN51
CN54
L R
VCR3
TUNER
from DSP
to DSP
to M.VR
ST1 DATA CLOCK GND -15V +15V
+15V -15V GND CLOCK DATA ST2
To CN53
To CN52
To CN51
To MAIN FUNCTION Ass'y AWZ2830
(To page 35, 36)
To SUB FUNCTION Ass'y AWZ2831 J54
(To page 38)

POWER SUPPLY &
SUPPLY 1 (AWZ2853)


(To page 18)
To TERMINAL Ass'y AWZ2835 CN58
Pre OUT
POWER IN
C SW RR RL L R C L R
FRONT PRE OUT
POWER IN
AKM1061 CONNECTION PLUG
AKB1141
(To page 55,56)
To CENTER AMP Ass'y AWZ2829
To J18
To J17
(To page 55)
To REAR AMP Ass'y AWZ2837
To J15
To J16
CENTER POWER AMP IN
GND O. LOAD. DET DC. DET -B OUT OUT +B
R L DC. DET GND +B REAR. L OUT REAR. R. OUT -B
CN18 KPC3
CN17 KPC7
CN15 KPC3
CN16 KPC6
(FRONT)
(CENTER)
(REAR)
(CENTER)
(SUPER WOOFER)
-5V
+5.6V
GND5V
+5V
2SC2878
Q803 Q804 Q805 Q806 Q807 Q808 Q809 Q810
Q807, Q808, Q812: MUTE (REAR)
Q809, Q810, Q813: MUTE (SUB FUNCTION)
Q803-Q806, Q811: MUTE (FRONT, CENTER, SUPER WOOFER)
IC802: REAR VOLUME
IC803: BUFFER AMP
IC804: BUFFER AMP
IC802 TC9176P
IC803 M5220L
IC804 M5220L
-B. center
+B. center
+B. rear
R. RET
-B. rear
MUTE. AC
(Sub. func Out)
(Rear Out)
(Front, Center & Super W. Out)
MR
CLOCK
DATA
ST1
ST2
ST3
ST4
CONTROL (1:6)
STOP
MUTE. T
STEREO
DATA. T
CLOCK. T
CE. T
TUNER_CONTROL (1:6)
C1
Von1
C2
Von2
Soff2
VCR1. MUTE
VCR2. MUTE
A1
B1
A2
B2
Soff1
ADPT
REC. SEL
ENH
SPLIT
VIDEO_CONTROL (3:16)
ENH. DC
GND
+B. front
F. RET
-B. front
GND5V
-5V
+12V. v
+5.6V
+12V. t
+15V
-15V
F. L. env
F. R. env
C. env
R. L. env
R. R. env
IC1801 NJM4558S-X
IC1802 NJM4558S-X
IC1803 NJM4558S-X
IC1801, IC1802, IC1803 (1/2): METER AMP
METER_AMP_IN (1:5)
(FRONT)
(AUDIO)
(FRONT)
CN51
CN54
CN55
CN56
CN57
R L R L R L from DSP to DSP to M.VR
ST1 DATA CLOCK GND -15V +15V
+15V -15V GND CLOCK DATA ST2
L R
VCR3 GND B2 A2 B1 A1 C1 Von1 C2 Von2 VCR2. MUTE VCR1. MUTE -5V 12V VGND
C VCR3 Y REC. SEL Soff1 B2 A2 B1 A1 VCR2. MUTE VCR1. MUTE Soff2 -5V 12V GND
MR GND REC. SEL ADPT ENH. DC SPL -5V 12V GND
To CN52
FUNCTION Ass'y AWZ2830
page 35, 36)
To CN51
To SUB FUNCTION Ass'y AWZ2831 J54
(To page 38)
To VIDEO FUNCTION Ass'y AWZ2832 CN55
(To page 17)
To S.VIDEO Ass'y AWZ2852 CN56
(To page 53)
To ENHANCER Ass'y AWZ2833 CN57
(To page 19)
(To page 24)
AWZ2979
J33

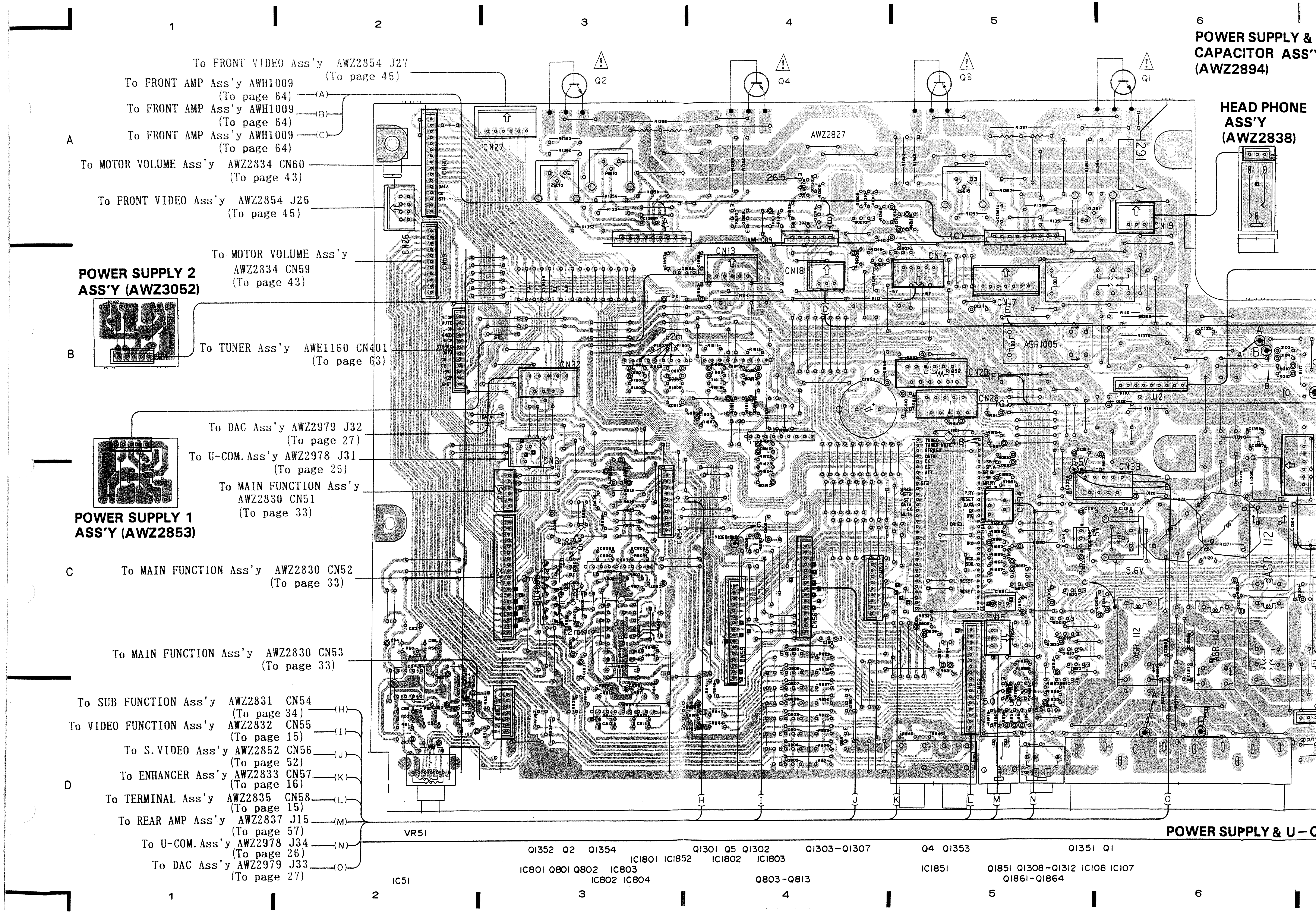
NOTES
1. Resistors
Indicated in ohm
unless otherwise
(F) unframable
2. Capacitors
Indicated in Capa
noted p pF
Indication witho
3. Transistors
without Indicati
4. Diodes
1SS252

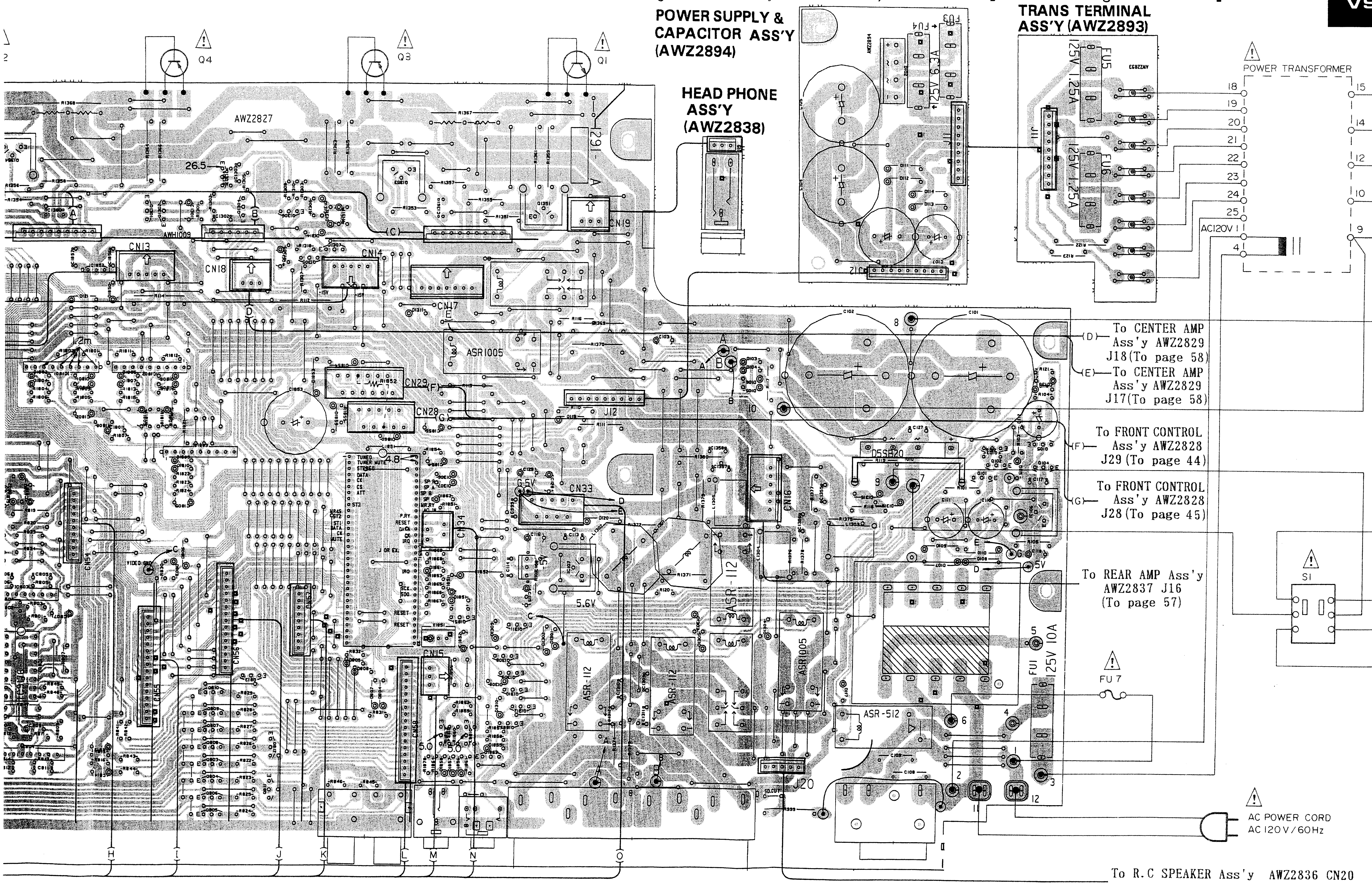
POWER SUPPER &


(AUDIO) : AUDIO SIGNAL
(FRONT) : FRONT AUDIO SIGNAL
(REAR) : REAR AUDIO SIGNAL
(CENTER) : CENTER AUDIO SIGNAL
(SUPER WOOFER) : SUPER WOOFER AUDIO SIGNAL
(FM/AM) : FM or AM AUDIO SIGNAL
FRONT PRE OUT
POWER IN
AKM1061 CONNECTION PLUG
AKM1061 CONNECTION PLUG
AKB1141
(To page 55,56)
To CENTER AMP Ass'y AWZ2829
To J18
To J17
(To page 55)
To REAR AMP Ass'y AWZ2837
To J15
To J16
CENTER
C. POWER AMP IN
GND
O. LOAD. DET
DC. DET
-B
OUT
OUT
+B
R
L
DC. DET
GND
+B
REAR. L. OUT
REAR. R. OUT
-B
CN18 KPC3
CN17 KPC7
CN15 KPC3
CN16 KPC6
(CENTER)
(REAR)
R845 470.0k
R846 470.0k
Q807, Q808, Q812 : MUTE(REAR)
Q809, Q810, Q813 : MUTE(SUB FUNCTION)
(CENTER)
2SC2878
Q807
Q808
Q809
Q810
R827 10.0k
R828 10.0k
R829 10.0k
-B. center
+B. center
+B. rear
R. RET
-B. rear
MUTE. AC
(Sub. func Out)
(Rear Out)
(Front, Center & Super W. Out)
D803
D804
D805
R830
R831
R832 2.2k
Q803-Q806, Q811 : MUTE (FRONT, CENTER, SUPER WOOFER)
MR
CLOCK
DATA
ST1
ST2
ST3
ST4
CONTROL(1:6)
STOP
MUTE. T
STEREO
DATA. T
CLOCK. T
CE. T
TUNER_CONTROL(1:6)
C1
Von1
C2
Von2
Soff2
VCR1. MUTE
VCR2. MUTE
A1
B1
A2
B2
Soff1
ADPT
REC. SEL
ENH
SPLIT
VIDEO_CONTROL(3:16)
ENH. DC
GND
-5V
+12V. v
+5. 6V
+12V. t
+15V
-15V
+B. front
F. RET
-B. front
GND5V
F. L. env
F. R. env
C. env
R. L. env
R. R. env
(FRONT)
To FRONT AMP Ass'y AWH1009
(To page 66, 67)
Q1351-Q1354, Q1-Q4 : FRONT AMP
R1350
R1351
R1361
R1353
R1363
R1365
Q1351
Q1353
2SC3298
2SA1306
12.3mA
76.7mA
C1360
B C E
Q1 2SC3281
Q3 2SA1302
L. CH
R1354
R1364
R1366
Q1354
Q1352
Q4 2SA1302
Q2 2SC3281
R. CH
12.3mA
76.4mA
R1352
R1362
R1360
C1361
VCH1043
(FRONT)
RY1306
ASR1005
R1370 330 2W
R1369 330 2W
AKN1002
AWZ2838
HEADPHONE Ass'y
J19
CN19 KPC3
RY1301
ASR-112
(FRONT)
R1371 10 1W
L1301 ATH1004
R1373
C1309
C1311
C1310
C1312
L1302 ATH1004
R1374
R1372 10 1W
SP A
SP B
RY1305 ASR1033
RY1302 ASR-112
AKE1011
L1303 ATH1011
R1377
R1375
C1355
C1356
L1304 ATH1011
R1376
R1378
L1305 ATH1011
R1379
C1357
C1358
R1380
RY1304 ASR1005
(REAR)
RY1303 ASR-112
(CENTER)
RL
RR
C
J20
To R.C. SPEAKER Ass'y AWZ2836 CN20
(To page 56)
These relay's coils appears on sheet 2
IC1801 NJM4558S-X
D1803
D1801
R1801 100.0k
R1803 100.0k
R1805 1.0k
R1807 39.0k
C1801 0.47/50
R1804 100.0k
D1802
D1804
R1802 100.0k
R1806 1.0k
R1808 39.0k
C1802 0.47/50
IC1802 NJM4558S-X
D1807
D1805
R1811 100.0k
R1813 100.0k
R1815 1.0k
R1817 39.0k
C1803 0.47/50
R1814 100.0k
D1806
D1808
R1812 100.0k
R1816 1.0k
R1818 39.0k
C1804 0.47/50
IC1801, IC1802, IC1803(1/2) : METER AMP
METER_AMP_IN(1:5)
FL
FR
C
RL
RR
IC1803 NJM4558S-X
D1810
D1809
R1821 100.0k
R1822 100.0k
R1823 1.0k
R1824 39.0k
C1805 0.47/50
CN55
VCR3
GND
B2
A2
B1
A1
C1
Von1
C2
Von2
VCR2. MUTE
VCR1. MUTE
-5V
12V
VGND
CN56
C
VCR3
Y
REC. SEL
Soff1
B2
A2
B1
A1
VCR2. MUTE
VCR1. MUTE
Soff2
-5V
12V
GND
CN57
MR
ENH
REC. SEL
ADPT
ENH. DC
SPL
-5V
12V
GND
To VIDEO FUNCTION Ass'y AWZ2832 CN55
(To page 17)
To S.VIDEO Ass'y AWZ2852 CN56
(To page 53)
To ENHANCER Ass'y AWZ2833 CN57
(To page 19)

NOTES
1. Resistors
Indicated in ohm 1/8W,± 5% Tolerance
unless otherwise noted in k kohm M Mohm
(F) unframable (f) quick open type
2. Capacitors
Indicated in Capacity (μ F)/Voltage(V)unless otherwise
noted p pF
Indication without voltage is 50V azept electrolytic.
3. Transistors
without indication NPN 2SC2458, PNP 2SA1048
4. Diodes
1SS252

POWER SUPPER & U COM Ass'y AWZ2827
(1/2)


POWER SUPPLY & CAPACITOR ASS'Y (AWZ2894)
HEAD PHONE ASS'Y (AWZ2838)
POWER SUPPLY 2 ASS'Y (AWZ3052)
POWER SUPPLY 1 ASS'Y (AWZ2853)
To FRONT VIDEO Ass'y AWZ2854 J27 (To page 45)
To FRONT AMP Ass'y AWH1009 (To page 64) (A)
To FRONT AMP Ass'y AWH1009 (To page 64) (B)
To FRONT AMP Ass'y AWH1009 (To page 64) (C)
To MOTOR VOLUME Ass'y AWZ2834 CN60 (To page 43)
To FRONT VIDEO Ass'y AWZ2854 J26 (To page 45)
To MOTOR VOLUME Ass'y AWZ2834 CN59 (To page 43)
To TUNER Ass'y AWE1160 CN401 (To page 63)
To DAC Ass'y AWZ2979 J32 (To page 27)
To U-COM. Ass'y AWZ2978 J31 (To page 25)
To MAIN FUNCTION Ass'y AWZ2830 CN51 (To page 33)
To MAIN FUNCTION Ass'y AWZ2830 CN52 (To page 33)
To MAIN FUNCTION Ass'y AWZ2830 CN53 (To page 33)
To SUB FUNCTION Ass'y AWZ2831 CN54 (To page 34) (H)
To VIDEO FUNCTION Ass'y AWZ2832 CN55 (To page 15) (I)
To S.VIDEO Ass'y AWZ2852 CN56 (To page 52) (J)
To ENHANCER Ass'y AWZ2833 CN57 (To page 16) (K)
To TERMINAL Ass'y AWZ2835 CN58 (To page 15) (L)
To REAR AMP Ass'y AWZ2837 J15 (To page 57) (M)
To U-COM. Ass'y AWZ2978 J34 (To page 26) (N)
To DAC Ass'y AWZ2979 J33 (To page 27) (O)
Q2
Q4
Q3
Q1
AWZ2827
AWH1009
CN27
CN26
CN60
CN59
CN13
CN18
CN14
CN17
CN19
CN29
CN28
CN32
CN31
CN33
CN34
CN51
CN52
CN53
CN54
CN55
CN56
CN57
CN58
CN15
J12
ASR1005
ASR-112
26.5
5.6V
5.0
VR51
POWER SUPPLY & U-C
Q1352 Q2 Q1354
IC1801 IC1852
Q1301 Q5 Q1302
IC1802 IC1803
Q1303-Q1307
Q4 Q1353
Q1351 Q1
IC801 Q801 Q802 IC803
IC802 IC804
Q803-Q813
IC1851
Q1851 Q1308-Q1312 IC108 IC107
Q1861-Q1864
IC51
1
2
3
4
5
6
A
B
C
D


4
5
6
7
8
POWER SUPPLY & CAPACITOR ASS'Y (AWZ2894)
HEAD PHONE ASS'Y (AWZ2838)
TRANS TERMINAL ASS'Y (AWZ2893)
POWER TRANSFORMER
Q4
Q3
Q1
AWZ2827
26.5
AWH1009
CN13
CN18
CN14
CN17
CN19
CN29
CN28
CN33
CN34
CN16
CN54
CN55
CN56
CN57
CN58
CN15
J12
J20
ASR1005
ASR-112
ASR-512
DSSB20
FU1 125V 10A
FU3
FU4 125V 6.3A
FU5 125V 1.25A
FU6 125V 1.25A
FU7
S1
4.8
5.6V
5V
5.0
1.2m
AC120V
(D) To CENTER AMP Ass'y AWZ2829 J18(To page 58)
(E) To CENTER AMP Ass'y AWZ2829 J17(To page 58)
(F) To FRONT CONTROL Ass'y AWZ2828 J29 (To page 44)
(G) To FRONT CONTROL Ass'y AWZ2828 J28 (To page 45)
To REAR AMP Ass'y AWZ2837 J16 (To page 57)
AC POWER CORD AC120V/60Hz
To R.C SPEAKER Ass'y AWZ2836 CN20 (To page 57)
A
B
C
D
H
I
J
K
L
M
N
O

POWER SUPPLY & U-COM ASS'Y (AWZ2827)

54 IC1801 IC1852 IC803 02 IC804

Q1301 Q5 Q1302 IC1802 IC1803 Q803-Q813

Q1303-Q1307

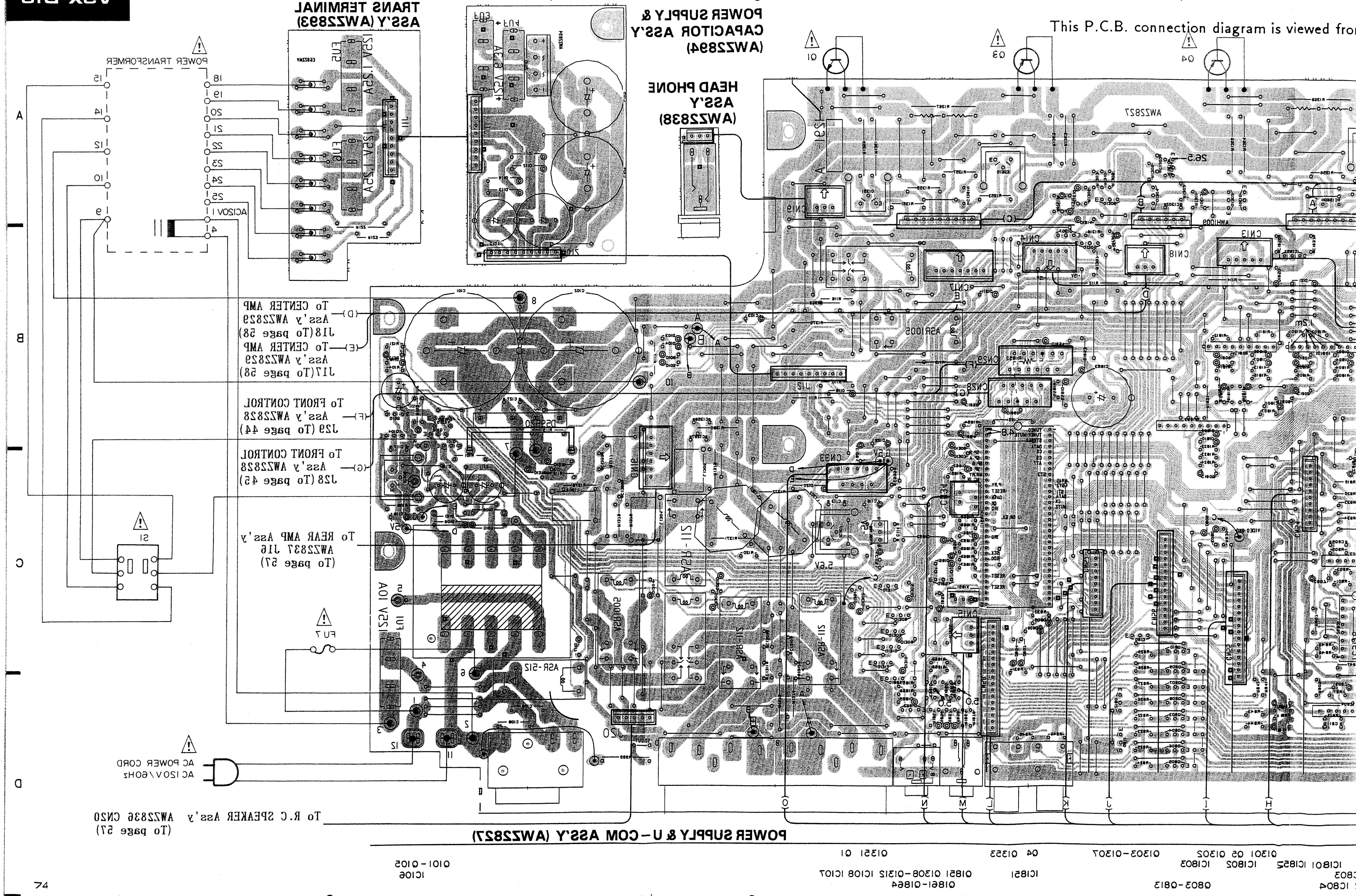
Q4 Q1353 IC1851

Q1851 Q1308-Q1312 IC108 IC107 Q1861-Q1864

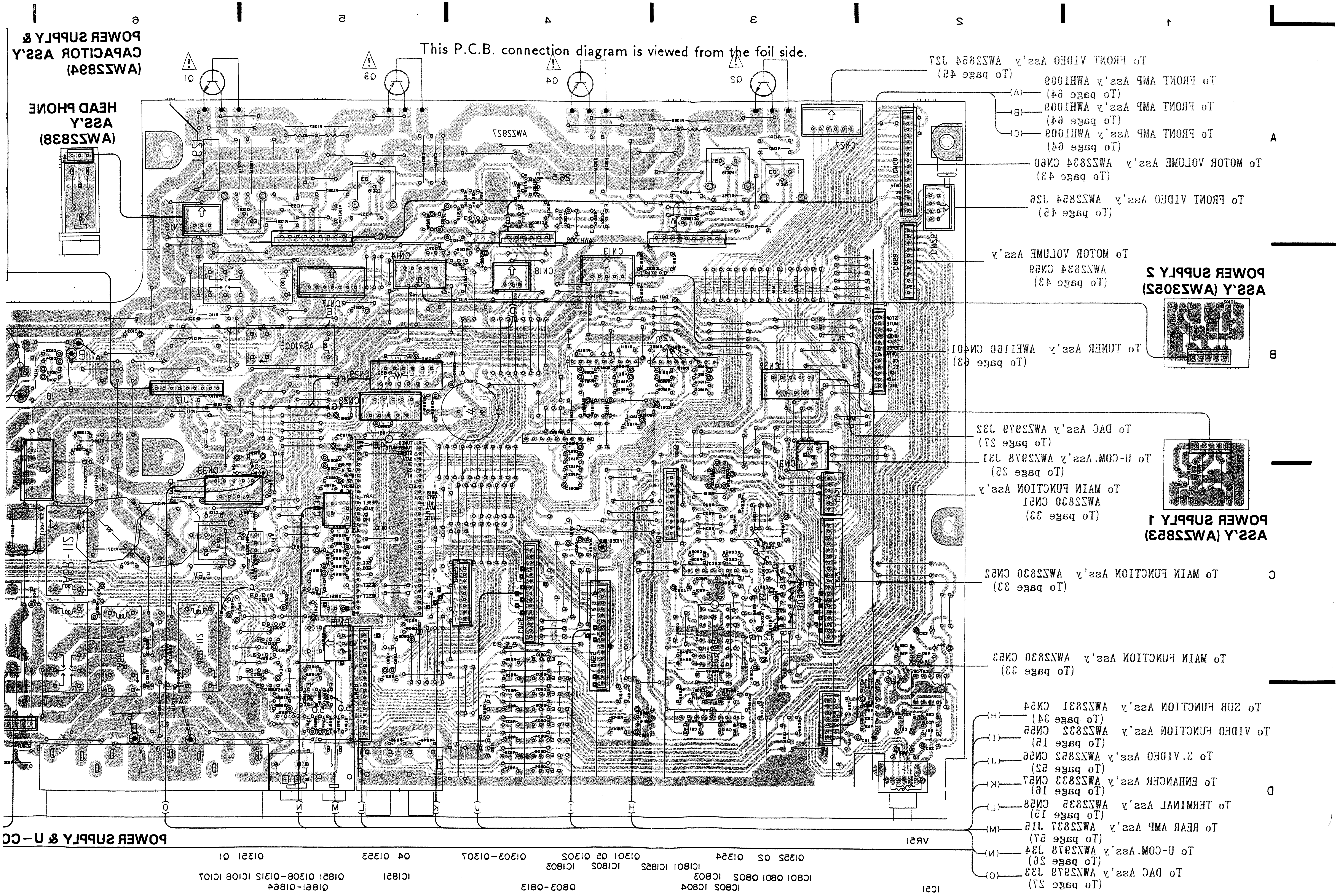
Q1351 Q1

Q101-Q105 IC106

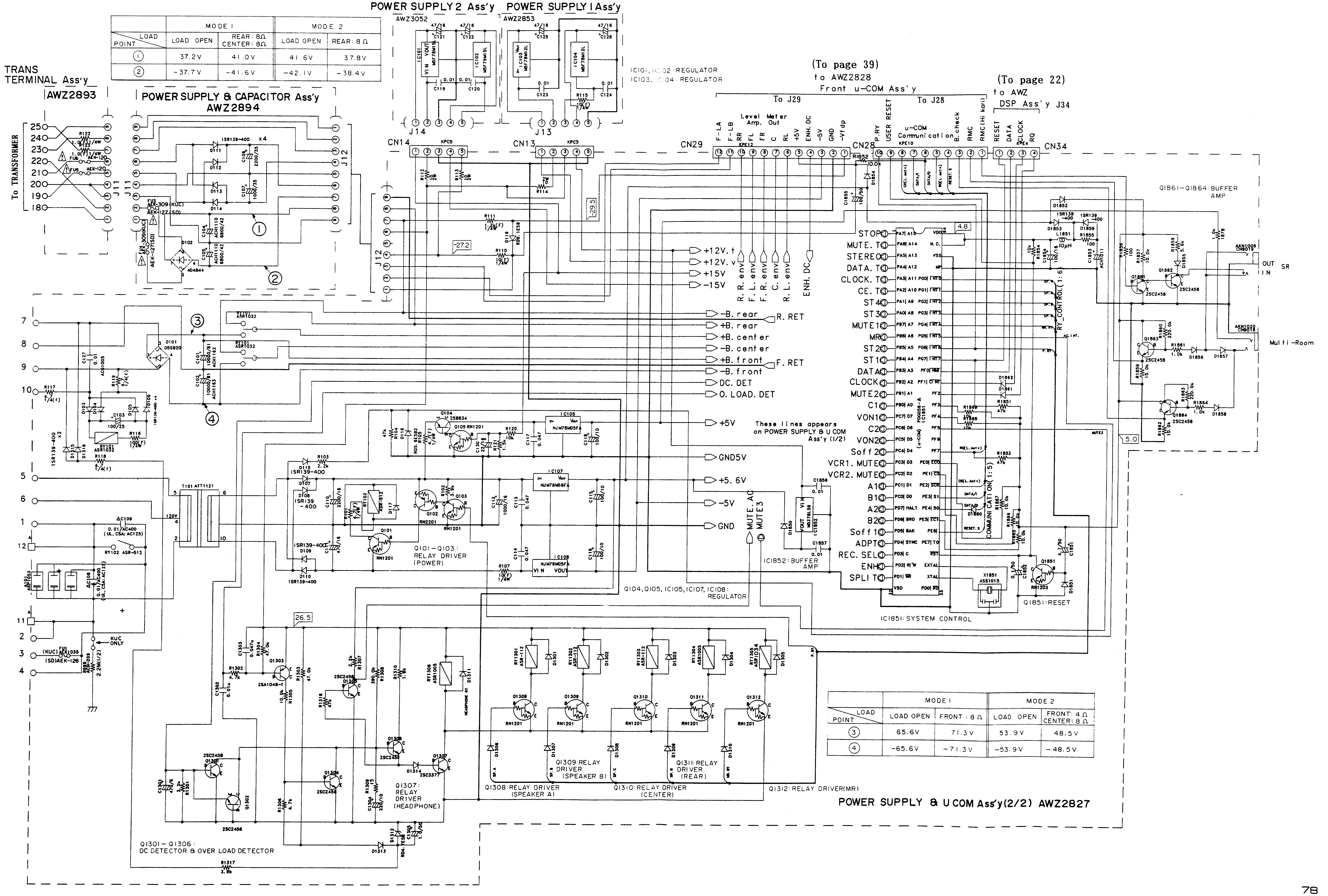
This P.C.B. connection diagram is viewed fro


8
7
6
5
4
TRANS TERMINAL ASS'Y (AWZ2893)
POWER SUPPLY & CAPACITOR ASS'Y (AWZ2894)
HEAD PHONE ASS'Y (AWZ2838)
POWER TRANSFORMER
AC120V 1
FU5
FU6
FU7
T2.5A 125V
J11
CN9
CN11
CN13
CN17
CN18
CN29
CN28
CN33
CN15
J12
J16
J20
Q1
Q3
Q4
S1
AWZ2827
AWZ2828
ASR1005
ASR-512
IU1 10A 125V
To CENTER AMP Ass'y AWZ2829 J18 (To page 58)
To CENTER AMP Ass'y AWZ2829 J17 (To page 58)
To FRONT CONTROL Ass'y AWZ2828 J29 (To page 44)
To FRONT CONTROL Ass'y AWZ2828 J28 (To page 45)
To REAR AMP Ass'y AWZ2837 J16 (To page 57)
AC POWER CORD
AC120V/60Hz
To R.C SPEAKER Ass'y AWZ2836 CN20 (To page 57)
POWER SUPPLY & U-COM ASS'Y (AWZ2827)
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
Q101-Q105
IC106
Q1351 Q1
Q1851 Q1308-Q1312 IC108 IC107
Q1861-Q1864
Q4 Q1353
IC1851
Q1303-Q1307
Q803-Q813
Q1301 Q5 Q1302
IC1803 IC1802
IC1801 IC1852
IC804
9
8
7
6
5
4

This P.C.B. connection diagram is viewed from the foil side.



6
5
4
3
2
1
A
B
C
D
POWER SUPPLY & CAPACITOR ASS'Y (AWZ2894)
HEAD PHONE ASS'Y (AWZ2838)
Q1
Q3
Q4
Q2
AWZ2827
AWH1009
ASR1005
CN19
CN4
CN13
CN18
CN17
CN27
CN60
CN26
CN59
CN32
CN29
CN28
CN33
CN31
CN51
CN52
CN53
CN34
CN15
J12
VR51
To FRONT VIDEO Ass'y AWZ2854 J27 (To page 45)
To FRONT AMP Ass'y AWH1009 (To page 64)
To FRONT AMP Ass'y AWH1009 (To page 64)
To FRONT AMP Ass'y AWH1009 (To page 64)
To MOTOR VOLUME Ass'y AWZ2834 CN60 (To page 43)
To FRONT VIDEO Ass'y AWZ2854 J26 (To page 45)
To MOTOR VOLUME Ass'y AWZ2834 CN59 (To page 43)
POWER SUPPLY 2 ASS'Y (AWZ3052)
To TUNER Ass'y AWE1160 CN401 (To page 63)
To DAC Ass'y AWZ2979 J32 (To page 27)
To U-COM.Ass'y AWZ2978 J31 (To page 25)
To MAIN FUNCTION Ass'y AWZ2830 CN51 (To page 33)
POWER SUPPLY 1 ASS'Y (AWZ2853)
To MAIN FUNCTION Ass'y AWZ2830 CN52 (To page 33)
To MAIN FUNCTION Ass'y AWZ2830 CN53 (To page 33)
(H) To SUB FUNCTION Ass'y AWZ2831 CN54 (To page 34)
(I) To VIDEO FUNCTION Ass'y AWZ2832 CN55 (To page 15)
(J) To S.VIDEO Ass'y AWZ2852 CN56 (To page 52)
(K) To ENHANCER Ass'y AWZ2833 CN57 (To page 16)
(L) To TERMINAL Ass'y AWZ2835 CN58 (To page 15)
(M) To REAR AMP Ass'y AWZ2837 J15 (To page 57)
(N) To U-COM.Ass'y AWZ2978 J34 (To page 26)
(O) To DAC Ass'y AWZ2979 J33 (To page 27)
POWER SUPPLY & U-CO
Q1 Q1351
IC107 IC108 Q1308–Q1312 Q1851
Q1861–Q1864
Q1353 Q4
IC1851
Q1303–Q1307
Q1302 Q5 Q1301
IC1803 IC1802 IC1852 IC1801
Q803–Q813
Q1354
Q2 Q1352
IC803 Q802 Q801 IC801
IC804 IC802
IC51


TRANS TERMINAL Ass'y
AWZ2893
To TRANSFORMER
POWER SUPPLY & CAPACITOR Ass'y
AWZ2894
POWER SUPPLY 2 Ass'y
AWZ3052
POWER SUPPLY 1 Ass'y
AWZ2853
IC101, IC102: REGULATOR
IC103, IC104: REGULATOR
(To page 39)
to AWZ2828
Front u-COM Ass'y
To J29
To J28
(To page 22)
to AWZ
DSP Ass'y J34
CN14
CN13
CN29
CN28
CN34
J11
J12
J13
J14
Level Meter Amp. Out
u-COM Communication
P.RY
USER RESET
B.check
RMC
RMC(Hi kari)
RESET
DATA
CLOCK
RQ
+12V.t
+12V.v
+15V
-15V
R.R.env
F.L.env
C.env
R.L.env
ENH.DC
-B.rear
+B.rear
+B.center
-B.center
+B.front
-B.front
R.RET
F.RET
DC.DET
O.LOAD.DET
+5V
GND5V
+5.6V
-5V
GND
MUTE.AC
MUTE3
These lines appears on POWER SUPPLY & U COM Ass'y (1/2)
STOP
MUTE.T
STEREO
DATA.T
CLOCK.T
CE.T
ST4
ST3
MUTE1
MR
ST2
ST1
DATA
CLOCK
MUTE2
C1
VON1
C2
VON2
Soff2
VCR1.MUTE
VCR2.MUTE
A1
B1
A2
B2
Soff1
ADPT
REC.SEL
ENH
SPLIT
RY CONTROL(1:6)
COMMUNICATION(1:5)
IC1851: SYSTEM CONTROL
IC1852: BUFFER AMP
Q1851: RESET
Q1861-Q1864: BUFFER AMP
OUT
IN
SR
Multi-Room
Q101-Q103: RELAY DRIVER (POWER)
Q104, Q105, IC105, IC107, IC108: REGULATOR
Q1301-Q1306: DC DETECTOR & OVER LOAD DETECTOR
Q1307: RELAY DRIVER (HEADPHONE)
Q1308: RELAY DRIVER (SPEAKER A)
Q1309: RELAY DRIVER (SPEAKER B)
Q1310: RELAY DRIVER (CENTER)
Q1311: RELAY DRIVER (REAR)
Q1312: RELAY DRIVER(MR)
KUC ONLY
29.5
-27.2
26.5
4.8
5.0
POWER SUPPLY & U COM Ass'y(2/2) AWZ2827

POINT \ LOAD	MODE 1		MODE 2	
	LOAD OPEN	REAR: 8Ω CENTER: 8Ω	LOAD OPEN	REAR: 8Ω
①	37.2V	41.0V	41.6V	37.8V
②	-37.7V	-41.6V	-42.1V	-38.4V

POINT \ LOAD	MODE 1		MODE 2	
	LOAD OPEN	FRONT: 8Ω	LOAD OPEN	FRONT: 4Ω CENTER: 8Ω
③	65.6V	71.3V	53.9V	48.5V
④	-65.6V	-71.3V	-53.9V	-48.5V

4. PCB 's PARTS LIST

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

  560Ω 56 × 10¹ 561..........................RD1/4PS $\boxed{5}\boxed{6}\boxed{1}$ J
  47kΩ 47 × 10³ 473..........................RD1/4PS $\boxed{4}\boxed{7}\boxed{3}$ J
  0.5Ω 0R5..RN2H $\boxed{0}\boxed{R}\boxed{5}$ K
  1Ω 010..RS1P $\boxed{0}\boxed{1}\boxed{0}$ K

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

  5.62kΩ 562 × 10¹ 5621........................RN1/4SR $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ F

MAIN FUNCTION ASS'Y (AWZ2830)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC201	E−SW IC	TC9164N
	IC202	E−SW IC	TC9163N
	IC203	OP AMP	M5238LF

CAPACITORS

Mark	No.	Description	Parts No.
	C201−208	CERAMIC CAPACITOR	CCCSL101J50
	C211,212	ELECTR.CAPACITOR	CEAS100M50
	C213	ELECTR.CAPACITOR	CEAS010M50
	C214,215	ELECTR.CAPACITOR	CEAS470M16
	C220,221	CERAMIC CAPACITOR	CKCYB102K50
	C222,223	CERAMIC CAPACITOR	CKCYB103K50

RESISTORS

Mark	No.	Description	Parts No.
		All rersistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK (8P)	AKB1127
		PIN JACK (6P)	AKB1138

SUB FUUCTION ASS'Y (AWZ2831)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC301	E−SW IC	TC9164N
	IC302	E−SW IC	TC9163N
	IC303	OP AMP	M5238LF

CAPACITORS

Mark	No.	Description	Parts No.
	C301−310	CERAMIC CAPACITOR	CCCSL101J50
	C315,316	ELECTR.CAPACITOR	CEAS220M50
	C317	ELECTR.CAPACITOR	CEAS010M50
	C318,319	ELECTR.CAPACITOR	CEAS470M16
	C320,321	CERAMIC CAPACITOR	CKCYB102K50

RESISTORS

Mark	No.	Description	Parts No.
		All resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK (6P)	AKB1140
		PIN JACK (8P)	AKB1144
	CN21,22	CONNECTOR (15P)	KPE15
	CN23	CONNECTOR (11P)	KPE11
	CN24	CONNECTOR (7P)	KPE7

VIDEO • FUNCTION ASS'Y (AWZ2832)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1601-1606	E-SW IC	NJM2234L
	Q1601-1606	TRANSISTOR	2SC2458
	Q1607,1608	TRANSISTOR	2SA1048
	D1601,1602	DIODE	1SS252

COIL

Mark	No.	Description	Parts No.
	L1601	AXIAL INDUCTOR	LAU101K

CAPACITORS

Mark	No.	Description	Parts No.
	C1601−1605	ELECTR.CAPACITOR	CEAS470M16
	C1606−1609	ELECTR.CAPACITOR	CEAS101M10
	C1610,1611	ELECTR.CAPACITOR	CEAS470M16
	C1612,1613	ELECTR.CAPACITOR	CEAS101M16
	C1614,1615	CERAMIC CAPACITOR	CCCSL030C50
	C1617	ELECTR.CAPACITOR	CEAS4R7M50
	C1625−1627	ELECTR.CAPACITOR	CEAS470M16
	C1628,1629	CERAMIC CAPACITOR	CKDYX473M25
	C1630	ELECTR.CAPACITOR	CEAS470M16
	C1632	CERAMIC CAPACITOR	CKDYF473Z50

RESISTORS

Mark	No.	Description	Parts No.
		All resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK (2P)	AKB1118
		PIN JACK (3P)	AKB1143

ENHANCER•ADP ASS'Y (AWZ2833)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1701,1702	E-SW IC	NJM2233BS
	IC1703	E-SW IC	NJM2234L
	IC1704		NJM2209S
	IC1705	E-SW IC	NJM2235S
	Q1702−1707	TRANSISTOR	2SC2458
	Q1708−1710	TRANSISTOR	2SA1048
	Q1711	TRANSISTOR	2SC2458
	Q1712	TRANSISTOR	2SA1048
	Q1713	TRANSISTOR	2SC2458
	Q1714,1715	TRANSISTOR	2SA1048
	Q1716	TRANSISTOR	2SC2458
	Q1718,1719	TRANSISTOR	2SC2458
	Q1720	TRANSISTOR	2SA1048
	Q1721−1726	TRANSISTOR	2SC2458
	Q1727	TRANSISTOR	RN2203
	D1701−1706	DIODE	1SS252
	D1707	ZENER DIODE	RD5.6ESB

COILS

Mark	No.	Description	Parts No.
	L1701	AXIAL INDUCTOR	LAU101K
	L1740	AXIAL INDUCTOR	LAU221K
	L1741	AXIAL INDUCTOR	LAU270K
	L1742	AXIAL INDUCTOR	LAU390K
	L1743,1744	AXIAL INDUCTOR	LAU221K
	L1745	AXIAL INDUCTOR	LAU270K
	L1746	AXIAL INDUCTOR	LAU390K
	L1747,1748	AXIAL INDUCTOR	LAU101K
	L1781	AXIAL INDUCTOR	LAU101K

CAPACITORS

Mark	No.	Description	Parts No.
	C1701	ELECTR.CAPACITOR	CEAS470M16
	C1702	CERAMIC CAPACITOR	CCCSL100D50
	C1703−1705	ELECTR.CAPACITOR	CEAS4R7M50
	C1706,1707	ELECTR.CAPACITOR	CEAS470M16
	C1708	ELECTR.CAPACITOR	CEAS101M10
	C1709	ELECTR.CAPACITOR	CEAS470M16
	C1710	CERAMIC CAPACITOR	CCCSL470J50
	C1711	AUDIO FILM CAPACITOR	CFTXA104J50
	C1712	CERAMIC CAPACITOR	CCCCH070D50
	C1713	CERAMIC CAPACITOR	CCCCH030C50
	C1714,1715	CERAMIC CAPACITOR	CCCCH680J50
	C1716	CERAMIC CAPACITOR	CCCSL101J50
	C1717,1718	CERAMIC CAPACITOR	CCCCH470J50
	C1719	ELECTR.CAPACITOR	CEAS101M10
	C1720	PL.STYRENE CAPACITOR	CQSA271J50
	C1721	ELECTR.CAPACITOR	CEAS2R2M50
	C1722	CERAMIC CAPACITOR	CCCSL221J50
	C1723	CERAMIC CAPACITOR	CCCSL151J50
	C1724	CERAMIC CAPACITOR	CCCSL180J50
	C1725	CERAMIC CAPACITOR	CCCSL220J50
	C1726	CERAMIC CAPACITOR	CKCYB472K50
	C1727	ELECTR.CAPACITOR	CEAS101M10
	C1728	ELECTR.CAPACITOR	CEAS470M16
	C1730,1731	ELECTR.CAPACITOR	CEAS2R2M50
	C1732,1733	ELECTR.CAPACITOR	CEAS470M16
	C1734	CERAMIC CAPACITOR	CCCSL100D50
	C1735	CERAMIC CAPACITOR	CKDYF103Z50
	C1736	CERAMIC CAPACITOR	CCCSL100D50
	C1737,1739, 1741,1743, 1745−1749	ELECTR.CAPACITOR	CEAS470M16
	C1752	ELECTR.CAPACITOR	CEAS101M16
	C1753	CERAMIC CAPACITOR	CCCSL470J50
	C1755,1756	ELECTR.CAPACITOR	CEAS470M16
	C1790	CERAMIC CAPACITOR	CCCSL100D50
	C1791	CERAMIC CAPACITOR	CCCSL050C50

RESISTORS

Mark	No.	Description	Parts No.
		All resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK (2P)	AKB1118
		PIN JACK (1P)	AKB1145
	CN25	CONNECTOR(9P)	KPE9

TERMINAL ASS'Y (AWZ2835)

CAPACITORS

Mark	No.	Description	Parts No.
	C751−756	CERAMIC CAPACITOR	CKCYB102K50

RESISTORS

Mark	No.	Description	Parts No.
		All resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK (1P)	AKB1139
		PIN JACK (6P)	AKB1140
		PIN JACK (2P)	AKB1142

S. VIDEO ASS'Y (AWZ2852)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1650	VIDEO SEITCH	LA7952
	IC1651	E-SW IC	NJM2233BS
	IC1652	VIDEO SEITCH	LA7952

Mark	No.	Description	Parts No.
	IC1653	E-SW IC	NJM2233BS
	IC1654,1655	VIDEO SEITCH	LA7952
	IC1656,1657	E-SW IC	NJM2234L
	IC1658	LOGIC IC	BU4066BL
	Q1650–1656	TRANSISTOR	2SC2458
	Q1657,1658	TRANSISTOR	RN2203
	Q1659	TRANSISTOR	2SC2458
	Q1662–1664	TRANSISTOR	2SA1048
	D1650–1653	DIODE	1SS252
	D1655	ZENER DIODE	RD5.1ESB1

CAPACITORS

	C1650–1652	ELECTR.CAPACITOR	CEAS4R7M50
	C1653–1655	ELECTR.CAPACITOR	CEAS470M16
	C1657–1659	ELECTR.CAPACITOR	CEAS4R7M50
	C1660	ELECTR.CAPACITOR	CEAS101M10
	C1661–1666	CERAMIC CAPACITOR	CKCYX103M25
	C1667–1674	ELECTR.CAPACITOR	CEAS470M16
	C1675–1677	ELECTR.CAPACITOR	CEAS101M16
	C1678	ELECTR.CAPACITOR	CEAS470M16
	C1687	CERAMIC CAPACITOR	CCPUSL470J50
	C1688	ELECTR.CAPACITOR	CEAS4R7M50
	C1689	ELECTR.CAPACITOR	CEAS470M16
	C1690	CERAMIC CAPACITOR	CKCYF473Z50
	C1691	ELECTR.CAPACITOR	CEAS470M25
	C1692–1694		CCPUSL470J50
	C1695	ELECTR.CAPACITOR	CEAS101M10
	C1696	ELECTR.CAPACITOR	CEAS470M25
	C1697,1698	CERAMIC CAPACITOR	CCCSL101J50
	C1699	CERAMIC CAPACITOR	CCCSL330J50

RESISTORS

		All resistors	RD1/8PM☐☐☐J

OTHER

		SOCKET	AKP1065

POWER SUPPLY & U–COM ASS'Y (AWZ2827)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC105	REGULATOR IC	NJM78M05FD
	IC107	REGULATOR IC	NJM78M56FA
	IC108	REGULATOR IC	NJM79M05FA
	IC1801-1803	OP-AMP IC	NJM4558S-X
	IC1851	U–COM	PDG056-A
	IC1852	REGULATOR IC	M5278L56
	IC51	OP-AMP-IC	M5220P
	IC801	LOGIC IC	BU4066BL
	IC802	E-VR IC	TC9176P
	IC803,804	OP-AMP IC	M5220L
	Q101	TRANSISTOR	RN1201
	Q102	TRANSISTOR	RN2201
	Q103	TRANSISTOR	RN1201
	Q104	TRANSISTOR	2SB560
	Q105	TRANSISTOR	RN1201
	Q1301,1302	TRANSISTOR	2SC2458
	Q1303	TRANSISTOR	2SA1048
	Q1304–1306	TRANSISTOR	2SC2458
	Q1307	TRANSISTOR	2SC3377
	Q1308–1312	TRANSISTOR	RN1201
	Q1351,1352	TRANSISTOR	2SC3298
	Q1353,1354	TRANSISTOR	2SA1306
	Q1851	TRANSISTOR	RN1203
	Q1861–1864	TRANSISTOR	2SC2458
	Q801	TRANSISTOR	RN2203
	Q802	TRANSISTOR	RN1203
	Q803–810	TRANSISTOR	2SC3327
	Q811–813	TRANSISTOR	RN2203
	D101	DIODE	D5SB20
	D103–106	DIODE	1SS252
	D107–110	DIODE	1SR139-400
	D115	DIODE	1SS252
	D116	ZENER DIODE	RD5.6ESB
	D117	DIODE	1SS252
	D119	ZENER DIODE	RD9.1ESB
	D120	DIODE	1SR139-400
	D121	DIODE	1SS252
	D1301–1311	DIODE	1SS252
	D1312	ZENER DIODE	RD4.7ESB
	D1313,1314	DIODE	1SS252
	D1315,1316	DIODE	1SR139-400
	D1801–1810, 1850–1852	DIODE	1SS252
	D1853,1854	DIODE	1SR139-400
	D1855–1858	DIODE	1SS252
	D1859	DIODE	1SR139-400
	D1860–0862	DIODE	1SS252
	D801	ZENER DIODE	RD5.1ESB
	D802	ZENER DIODE	RD5.1ESB1
	D803–809	DIODE	1SS252

RELAIES

	RY101	RELAY	ASR1032
	RY102	RELAY	ASR-512
	RY1301–1303	RELAY	ASR-112
	RY1304	RELAY	ASR1005
	RY1305	RELAY	ASR1034
	RY1306	RELAY	ASR1005

Mark	No.	Description	Parts No.
COILS & TRANSFORMER			
	L1301,1302	COIL	ATH1004
	L1303−1305	COIL	ATH1011
	L1851	AXIAL INDUCTOR	LAU100K
	T101	POWER TRANSFORMER	ATT1121
CAPACITORS			
	C101	CAPACITOR	ACH1162
	C102	CAPACITOR	ACH1163
	C103	ELECTR.CAPACITOR	CEAS101M25
	C108,109	CKA (0.01/AC400V)	ACG1003
	C110	ELECTR.CAPACITOR	CEAS222M16
	C111	ELECTR.CAPACITOR	CEAS471M16
	C112	ELECTR.CAPACITOR	CEAS102M16
	C113,114	CERAMIC CAPACITOR	CKCYF473Z50
	C115,116	ELECTR.CAPACITOR	CEAS101M10
	C117	CERAMIC CAPACITOR	CKDYF473Z50
	C118	ELECTR.CAPACITOR	CEAS101M10
	C127	CKA (0.01/AC250V)	ACG1005-A
	C128,129	ELECTR.CAPACITOR	CEAS470M16
	C130	ELECTR.CAPACITOR	CEAS220M16
	C1301	ELECTROLYTIC CAPACIT	CEAS471M6
	C1302	CERAMIC CAPACITOR	CKCYF103Z50
	C1303	CERAMIC CAPACITOR	CKCYF473Z50
	C1304	ELECTR.CAPACITOR	CEAS221M10
	C1305	ELECTR.CAPACITOR	CEAS010M50
	C1309−1312	AUDIO FILM CAPACITOR	CFTXA104J50
	C1355−1358	AUDIO FILM CAPACITOR	CFTXA104J50
	C1360,1361	POLYESTER CAPACITOR	CQMXA103J100
	C1801−1805	ELECTR.CAPACITOR	CEASR47M50
	C1851	ELECTR.CAPACITOR	CEAS4R7M50
	C1852	ELECTR.CAPACITOR	CEAS0R1M50
	C1853	ELECTROLYTIC CAPACIT	ACH1011
	C1854	ELECTR.CAPACITOR	CEAS101M16
	C1855	ELECTR.CAPACITOR	CEAS101M50
	C1856,1857	CERAMIC CAPACITOR	CKCYF103Z50
	C51,52	ELECTR.CAPACITOR	CEAS100M25
	C53,54	CERAMIC CAPACITOR	CKCYB331K50
	C55,56	ELECTROLYTIC CAPACIT	CEAS471M6
	C57,58	AUDIO FILM CAPACITOR	CFTXA243J50
	C59,60	AUDIO FILM CAPACITOR	CFTXA823J50
	C61,62	ELECTR.CAPACITOR	CEAS2R2M50

Mark	No.	Description	Parts No.
	C63,64	ELECTR.CAPACITOR	CEAS101M16
	C801,802	ELECTR.CAPACITOR	CEAS4R7M50
	C805,806	CERAMIC CAPACITOR	CCCSL470J50
	C807−810	ELECTR.CAPACITOR	CEAS4R7M50
	C811,812	CERAMIC CAPACITOR	CKCYB331K50
	C813,814	ELECTR.CAPACITOR	CEAS4R7M50
	C815,816	ELECTR.CAPACITOR	CEAS470M16
	C999	CERAMIC CAPACITOR	CKCYB102K50
RESISTORS			
	R101,105	CARBON FILM RESISTOR	RD1/4PMF4R7J
	R107,110	CARBON FILM RESISTOR	RD1/4PMF100J
	R111	CARBON FILM RESISTOR	RD1/4PMF122J
	R112−114	METAL OXIDE RESISTOR	RS2LMF100J
	R116	CARBON FILM RESISTOR	RD1/4PMF101J
	R117−119	FUSLIBLE RESISTOR	RFA1/4PS4R7J
	R1351−1354	CARBON FILM RESISTOR	RD1/4PMF4R7J
	R1355−1358	CARBON FILM RESISTOR	RD1/4PMF470J
	R1359,1360	FUSLIBLE RESISTOR	RFA1/4PS4R7J
	R1361−1364	CARBON FILM RESISTOR	RD1/4PMF4R7J
	R1365,1366	FUSLIBLE RESISTOR	RFA1/4PS4R7J
	R1367,1368	RESISTOR (0.33, 5W)	ACN1063
	R1369,1370	METAL OXIDE RESISTOR	RS2LMF331J
	R1371−1374	METAL OXIDE RESISTOR	RS1LMF100J
	R1375−1378	CARBON FILM RESISTOR	RD1/4PMF100J
	R1379,1380	METAL OXIDE RESISTOR	RS1LMF100J
	R819,820	CARBON FILM RESISTOR	RD1/4PMF102J
	R999	RESISTOR(2.2M, 1/2W)	ACN-209
	VR51	VR	ACS1060
		Other resistors	RD1/8PM□□□J
OTHERS			
	CN13,14	CONNECTOR (5P)	KPC5
	CN15	JUMPER CONNECTOR (3P)	KPC3
	CN16	JUMPER CONNECTOR (6P)	KPC6
	CN17	CONNECTOR (7P)	KPC7
	CN18,19	JUMPER CONNECTOR (3P)	KPC3

Mark	No.	Description	Parts No.
	CN26	CONNECTOR (4P)	KPC4
	CN27	JUMPER CONNECTOR (6P)	KPC6
	CN28	CONNECTOR (10P)	KPE10
	CN29	CONNECTOR (12P)	KPE12
	CN31	CONNECTOR (3P)	KPE3
	CN32,33	CONNECTOR (9P)	KPE9
	CN34	CONNECTOR (4P)	KPE4
		PIN JACK (4P)	AKB1141
		SPEAKER TERMINAL 8-P	AKE1011
		JACK	AKN1006
		JACK	AKN1020
		AC OUTLET(3P)	AKP1053
		AMP ASSY	AWH1009
	X1851	CRYSTAL RESONATOR	ASS1015

HEAD PHONE ASS'Y (AWZ2838)

OTHER

		JACK	AKN1002

POWER SUPPLY 1 ASS'Y (AWZ2853)

SEMICONDUCTORS

	IC103,104	REGULATOR IC	M5F78M12L

CAPACITORS

	C123,124	CERAMIC CAPACITOR	CKCYF103Z50
	C125,126	ELECTR.CAPACITOR	CEAS470M16

RESISTOR

	R115	CARBON FILM RESISTOR	RD1/4PMF100J

TRANS TERMINAL ASS'Y (AWZ2893)

RESISTORS

	R122,123	CARBON FILM RESISTOR	RD1/4PMF010J

POWER SUPPLY & CAPACITOR ASS'Y (AWZ2894)

SEMICONDUCTORS

	D102	DIODE	4D4B44
	D111−114	DIODE	1SR139-400

CAPACITORS

Mark	No.	Description	Parts No.
	C104,105	ELECTROLYTIC CAPACIT	ACH1110
	C106	ELECTR.CAPACITOR	CEAS222M35
	C107	ELECTROLYTIC CAPACIT	CEAS102M35

POWER SUPPLY 2 ASS'Y (AWZ3052)

SEMICONDUCTORS

	IC101	REGULATOR IC	M5F78M15L
	IC102	REGURATOR IC	M5F79M15L

CAPACITORS

	C119,120	CERAMIC CAPACITOR	CKCYF103Z50
	C121,122	ELECTR.CAPACITOR	CEAS470M16

FRONT CONTROL ASS'Y (AWZ2828)

SEMICONDUCTORS

	IC1901	DISPLAY U−COM	PDG055-A
	IC1902	FL DRIVER IC	MSC7112-01SS
	IC1903	LOGIC IC	MC14051BCP
	IC1904	OP-AMP IC	NJM4558S-X
	Q1901,1902	TRANSISTOR	2SA1048
	Q1903	TRANSISTOR	RN1203
	Q1904	TRANSISTOR	RN1201
	Q1905	TRANSISTOR	RN2201
	Q1906−1915	TRANSISTOR	2SC2458
	D1901−1903	LED(RED)	AEL1108
	D1904−1907	LED	AEL1113
	D1908	LED(RED)	AEL1108
	D1910-1919, 1924−1926, 1930	DIODE	1SS252
	D1933-1936		RD5. 1ESB2

SWITCHES

	S1901−1915	SWITCH	ASG1038
	S1916−1923	SWITCH	ASG1034
	S1925−1953	SWITCH	ASG1034
	S1954−1964	SWITCH	ASG1038
	S1980	SWITCH	ASG1034
	S1990	ROTARY ENCODER	ASX1008

CAPACITORS

	C1901	CERAMIC CAPACITOR	CCCSL101J50
	C1902	ELECTROLYTIC CAPACIT	CEASR22M50
	C1903	CERAMIC CAPACITOR	CKCYF223Z50
	C1904	CERAMIC CAPACITOR	CKCYX823M25
	C1910	CERAMIC CAPACITOR	CKCYB103K50

Mark	No.	Description	Parts No.
	C1911	ELECTR.CAPACITOR	CEAS101M16
	C1912	ELECTR.CAPACITOR	CEAS010M50
	C1913	CERAMIC CAPACITOR	CKCYB103K50
	C1914	ELECTR.CAPACITOR	CEAS220M16
	C1915	CERAMIC CAPACITOR	CKCYX104M25
	C1985,1986	CERAMIC CAPACITOR	CKCYB392K50
RESISTORS			
	R1902−1904	CARBON FILM RESISTOR	RD1/4PM331J
	R1907,1908	CARBON FILM RESISTOR	RD1/4PM221J
	R1941	CARBON FILM RESISTOR	RD1/4PM271J
	R1972	CARBON FILM RESISTOR	RD1/4PM100J
		Other resistors	RD1/8PM□□□J
OTHERS			
		FILTER(FL)	AAK1991
		REMOTE RECEIVER UNIT	AXX1010
	CN1990	SOCKET	AKP1068
	V1901	FL TUBE	AAV1097
	X1901	CERAMIC OSCILLATOR	ASS1022

CENTER AMP ASS'Y (AWZ2829)

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
	IC901	AUDIO IC	PA0045
	Q901	TRANSISTOR	2SC2240
	Q902	TRANSISTOR	2SA979
	Q903	TRANSISTOR	2SA970
	Q904	TRANSISTOR	2SC2705
	Q905	TRANSISTOR	2SA1145
	Q906	TRANSISTOR	2SA1306
	Q907	TRANSISTOR	2SC3298
	Q908	TRANSISTOR	2SC2240
	D901−909	DIODE	1SS252
	D918,919	ZENER DIODE	RD12ESB
CAPACITORS			
	C901	ELECTR.CAPACITOR	CEAS2R2M50
	C902	MYLOR FILM CAPACITOR	CQMA102J50
	C903	CERAMIC CAPACITOR	CCCSL221K500
	C904	ELECTROLYTIC CAPACIT	CEXA471M16
	C905	MICA CAPACITOR	CMA150J500
	C906	CERAMIC CAPACITOR	CCCSL020C500
	C907	CERAMIC CAPACITOR	CCCSL151K500
	C908,909	CERAMIC CAPACITOR	CCCSL680K500
	C910,911	CERAMIC CAPACITOR	CCCSL101K500
	C912	ELECTROLYTIC CAPACIT	CEANP010M100
	C919	POLYESTER CAPACITOR	CQMXA103J100
RESISTORS			
	R901	CARBON FILM RESISTOR	RDR1/4PM331J
	R903	CARBON FILM RESISTOR	RD1/4PM393J
	R904	FUSLIBLE RESISTOR	RFA1/4PS101J
	R905,907	CARBON FILM RESISTOR	RD1/4PM□□□J
	R908	FUSLIBLE RESISTOR	RFA1/4PS101J
	R909,910	CARBON FILM RESISTOR	RDR1/2PM□□□J
	R911	CARBON FILM RESISTOR	RD1/4PM104J
	R912,913	FUSLIBLE RESISTOR	RFA1/4PS□□□J
	R914,915, 918	CARBON FILM RESISTOR	RD1/4PM□□□J
	R919−922	CARBON FILM RESISTOR	RD1/4PMF□□□J
	R923	FUSLIBLE RESISTOR	RFA1/4PS4R7J
	R924,925	CARBON FILM RESISTOR	RD1/4PMF470J
	R926	FUSLIBLE RESISTOR	RFA1/4PS4R7J
	R927,928, 931,932	CARBON FILM RESISTOR	RD1/4PMF□□□J
	R934	RESISTOR (0.33, 5W)	ACN1063

MOTOR VOLUME ASS'Y (AWZ2834)

SEMICONDUCTORS			
	IC501	OP-AMP IC	M5220L
	IC502	E-VR IC	TC9154AP
	IC503	OP-AMP IC	M5220L
	IC504	OP-AMP IC	NJM4558S-X
	IC505	MECHANISM DRIVER IC	TA7291S
	Q501	TRANSISTOR	RN1203
	D502	DIODE	1SS252
	D503,504	ZENER DIODE	RD4.7ESB
	D551,552	ZENER DIODE	RD5.1ESB
COILS			
	L541,542	AXIAL INDUCTOR	LAU560K

CAPACITORS

Mark	No.	Description	Parts No.
	C1988	CERAMIC CAPACITOR	CKCYB102K50
	C501,502	ELECTR.CAPACITOR	CEAS100M50
	C503,504	CERAMIC CAPACITOR	CCCSL560J50
	C505－508	ELECTR.CAPACITOR	CEAS4R7M50
	C510	CERAMIC CAPACITOR	CCCSL221J50
	C511,512	ELECTR.CAPACITOR	CEAS4R7M50
	C513	CERAMIC CAPACITOR	CCCSL221J50
	C514,515	ELECTR.CAPACITOR	CEAS4R7M50
	C516	AUDIO FILM CAPACITOR	CFTXA104J50
	C517	AUDIO FILM CAPACITOR	CFTXA274J50
	C518	AUDIO FILM CAPACITOR	CFTXA153J50
	C519	ELECTR.CAPACITOR	CEAS4R7M50
	C541	ELECTR.CAPACITOR	CEAS100M50
	C542,543	CERAMIC CAPACITOR	CKCYF473Z50
	C544	ELECTR.CAPACITOR	CEAS221M10
	C551,552	ELECTR.CAPACITOR	CEAS470M16

RESISTORS

Mark	No.	Description	Parts No.
	R552,559	CARBON FILM RESISTOR	RD1/4PM821J
	VR501	VR	ACX1044
		Other resistors	RD1/8PM□□□J

R. C. SPEAKER ASS'Y (AWZ2836)

OTHERS

Mark	No.	Description	Parts No.
		SPEAKER TERMINAL (4P)	AKE1007
		SPEAKER TERMINAL (4P)	AKE1022
	CN20	CONNECTOR (5P)	KPC5

REAR AMP ASS'Y (AWZ2837)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1401,1402	PREDRIVER-IC	UPC1270H
	Q1401,1402	TRANSISTOR	2SC2458

CAPACITORS

Mark	No.	Description	Parts No.
	C1401,1402	ELECTR.CAPACITOR	CEAS2R2M50
	C1403,1404	MYLOR FILM CAPACITOR	CQMA152J50
	C1405,1406	ELECTR.CAPACITOR	CEAS100M50
	C1407,1408	CERAMIC CAPACITOR	CCCSL680J50
	C1409	CERAMIC CAPACITOR	CCCSL271J50
	C1410	CERAMIC CAPACITOR	CKCYB471K50
	C1411,1412	AUDIO FILM CAPACITOR	CFTXA333J50
	C1413,1414	ELECTR.CAPACITOR	CEAS101M10
	C1415,1416	ELECTR.CAPACITOR	CEAS010M50
	C1430	ELECTROLYTIC CAPACIT	CEAS100M100

RESISTORS

Mark	No.	Description	Parts No.
	R1417,1418	RESISTOR (0.22, 2W)	ACN-131
	R1431－1434	FUSLIBLE RESISTOR	RFA1/4PS4R7J
		Other ressitors	RD1/8PM□□□J

FRONT VIDEO ASS'Y (AWZ2854)

CAPACITORS

Mark	No.	Description	Parts No.
	C1991,1992	CERAMIC CAPACITOR	CKCYX473M25

RESISTORS

Mark	No.	Description	Parts No.
		All resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK(1P)	AKB1082
		SOCKET	AKP1067

DSP • U－COM ASS'Y (AWZ2978)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1101,1102	OP-AMP IC	M5218PF
	IC1103	LOGIC IC	TC4053BP
	IC1104	OP AMP	M5238PF
	IC1105	AD CONVERTER IC	TD6726N
	IC1106	OP-AMP IC	M5218L
	IC1107	DSP IC	LC83010P
	IC1108	DSP IC	PD0055
	IC1109,1110	MEMORY IC	MB81464-12
	IC1111	DSP U－COM	PD0069B1
	IC1112	LOGIC IC	TC74HC02AP
	D1101,1102	DIODE	1SS252

COILS

Mark	No.	Description	Parts No.
	F1101,1102	FILTER	ATF1071
	L1101－1108	FERRITE BEAD	ATX1008-A
	L1109	AXIAL INDUCTOR	LAUR33M

CAPACITORS

Mark	No.	Description	Parts No.
	C1101－1104	ELECTR.CAPACITOR	CEAS470M25
	C1105,1106	MYLOR FILM CAPACITOR	CQMA272J50
	C1107,1108	ELECTR.CAPACITOR	CEAS470M25
	C1109,1110	PL.STYRENE CAPACITOR	CQSXA152J160
	C1111,1112	ELECTR.CAPACITOR	CEAS470M25

Mark	No.	Description	Parts No.
	C1113,1114	CERAMIC CAPACITOR	CKDYX473M25
	C1115	CERAMIC CAPACITOR	CKDYB102K50
	C1116–1118	CERAMIC CAPACITOR	CKDYX473M25
	C1120	CERAMIC CAPACITOR	CKDYX473M25
	C1121	CERAMIC CAPACITOR	CKDYB102K50
	C1123,1124	ELECTROLYTIC CAPACIT	CEANP470M10
	C1125,1126	MYLOR FILM CAPACITOR	CQMA103J50
	C1127,1128	PL.STYRENE CAPACITOR	CQSA151J50
	C1129,1130	PL.STYRENE CAPACITOR	CQSXA182J160
	C1131,1132	CERAMIC CAPACITOR	CCDCH180J50
	C1133,1134	CERAMIC CAPACITOR	CKDYX473M25
	C1135	CERAMIC CAPACITOR	CKDYX473M25
	C1136	CERAMIC CAPACITOR	CCDCH220J50
	C1138	ELECTR.CAPACITOR	CEAS101M10
	C1139,1140	CERAMIC CAPACITOR	CKDYX473M25
	C1137		CCDCH030C50
	C1141	ELECTR.CAPACITOR	CEAS101M10
	C1142	CERAMIC CAPACITOR	CKDYX473M25
	C1143	ELECTR.CAPACITOR	CEAS101M10
	C1144,1145	CERAMIC CAPACITOR	CKDYX473M25
	C1147,1148	CERAMIC CAPACITOR	CKDYX473M25
	C1149	CERAMIC CAPACITOR	CCCCH101J50
	C1150	CERAMIC CAPACITOR	CKDYX473M25
	C1151,1152	CERAMIC CAPACITOR	CCDCH100D50
	C1154	ELECTR.CAPACITOR	CEAS101M10
	C1155,1156	CERAMIC CAPACITOR	CKDYX473M25
	C1157	ELECTR.CAPACITOR	CEAS101M10
	C1158	CERAMIC CAPACITOR	CKDYB103K50
	C1159	CERAMIC CAPACITOR	CKDYB102K50
	C1160	CERAMIC CAPACITOR	CKDYX473M25
	C1161–1163	CERAMIC CAPACITOR	CKDYB102K50
	C1164	CERAMIC CAPACITOR	CCDCH270J50
	C1165,1166	CERAMIC CAPACITOR	CKDYX473M25

RESISTORS

Mark	No.	Description	Parts No.
	VR1101–1104	VR	VRTS6HS103
	VR1105,1106	VR	VRTS6HS472
	VR1107	VR	VRTB6VS472
		Other resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
		SOCKET 9-P	AKP-076
	X1102	CERAMIC RESONATOR	ASS1045
	X1103	CRYSTAL RESONATOR	ASS1035
	X1104	CRYSTAL RESONATOR	ASS1047

DAC ASS'Y (AWZ2979)

SEMICONDUCTOR

Mark	No.	Description	Parts No.
	IC1201-1203	IC	PD0029
	IC1204	D/A CONVERTER	UPD6376CX
	IC1205,1206	IC	PCM56P
	IC1207	D/A CONVERTER	UPD6376CX
	IC1208	OP-AMP IC	M5218PF
	IC1209	LOGIC IC	TC4052BP
	IC1210,1211	OP-AMP IC	M5218PF
	IC1212	LOGIC IC	TC4052BP
	IC1213,1214	OP-AMP IC	M5218PF
	IC1215	LOGIC IC	TC4052BP
	IC1216	OP-AMP IC	M5218PF
	IC1217	REGULATOR IC	NJM79L05A
	IC1218	REGULATOR IC	NJM7805FA
	IC1219	DOLBY-B IC	LA2730
	IC1220	OP-AMP IC	M5218L

COILS

Mark	No.	Description	Parts No.
	L1201,1202	FERRITE BEAD	ATX1008-A
	L1203–1208	AXIAL INDUCTOR	LAU330K
	L1209–1213	FERRITE BEAD	ATX1008-A
	L1215,1216	FERRITE BEAD	ATX1008-A

CAPACITORS

Mark	No.	Description	Parts No.
	C1201	ELECTR.CAPACITOR	CEAS101M10
	C1202	CERAMIC CAPACITOR	CKDYB102K50
	C1203–1205	CERAMIC CAPACITOR	CKDYX473M25
	C1206	CERAMIC CAPACITOR	CKDYB102K50
	C1207–1214	CERAMIC CAPACITOR	CKDYX473M25
	C1215,1216	ELECTR.CAPACITOR	CEAS470M10
	C1217,1218	CERAMIC CAPACITOR	CKDYX473M25
	C1219	ELECTR.CAPACITOR	CEAS101M10
	C1220,1221	ELECTR.CAPACITOR	CEAS470M10
	C1222,1223	CERAMIC CAPACITOR	CKDYX473M25
	C1224	ELECTR.CAPACITOR	CEAS101M10
	C1225,1226	ELECTR.CAPACITOR	CEAS470M25
	C1227,1228	MYLOR FILM CAPACITOR	CQMA102J50
	C1229,1230	MYLOR FILM CAPACITOR	CQMA272J50
	C1231,1232	CERAMIC CAPACITOR	CCCCH101J50
	C1233,1234	ELECTR.CAPACITOR	CEAS470M25
	C1235,1236	MYLOR FILM CAPACITOR	CQMA272J50
	C1237,1238	ELECTR.CAPACITOR	CEAS470M25
	C1239,1240	PL.STYRENE CAPACITOR	CQSXA152J160
	C1241,1242	MYLOR FILM CAPACITOR	CQMA102J50
	C1243,1244	MYLOR FILM CAPACITOR	CQMA272J50
	C1245,1246	CERAMIC CAPACITOR	CCCCH101J50
	C1247,1248	ELECTR.CAPACITOR	CEAS470M25

Mark	No.	Description	Parts No.
	C1249,1250	MYLOR FILM CAPACITOR	CQMA102J50
	C1251,1252	ELECTR.CAPACITOR	CEAS470M25
	C1253,1254	PL.STYRENE CAPACITOR	CQSXA152J160
	C1255−1258	ELECTR.CAPACITOR	CEAS470M25
	C1259,1260	MYLOR FILM CAPACITOR	CQMA102J50
	C1261,1262	MYLOR FILM CAPACITOR	CQMA272J50
	C1263,1264	CERAMIC CAPACITOR	CCCCH101J50
	C1265,1266	ELECTR.CAPACITOR	CEAS470M25
	C1267	MYLOR FILM CAPACITOR	CQMA102J50
	C1268	MYLOR FILM CAPACITOR	CQMA392J50
	C1269	ELECTR.CAPACITOR	CEAS470M25
	C1270	ELECTROLYTIC CAPACIT	CEAS010M50
	C1271	PL.STYRENE CAPACITOR	CQSXA152J160
	C1272	MYLOR FILM CAPACITOR	CQMA471J50
	C1273	ELECTR.CAPACITOR	CEAS101M10
	C1274	ELECTR.CAPACITOR	CEAS100M50
	C1275	ELECTR.CAPACITOR	CEAS470M25
	C1276	ELECTR.CAPACITOR	CEAS100M50
	C1277	ELECTR.CAPACITOR	CEAS470M25
	C1278	ELECTR.CAPACITOR	CEAS220M16
	C1279	ELECTR.CAPACITOR	CEAS470M25
	C1280	ELECTR.CAPACITOR	CEAS100M25
	C1281	ELECTR.CAPACITOR	CEASR33M50
	C1282	AUDIO FILM CAPACITOR	CFTXA104J50
	C1283	MYLOR FILM CAPACITOR	CQMA333J50
	C1284	ELECTR.CAPACITOR	CEAS010M50
	C1285	ELECTR.CAPACITOR	CEAS220M16
	C1286	ELECTR.CAPACITOR	CEAS101M16
	C1287	MYLOR FILM CAPACITOR	CQMA472J50
	C1288	MYLOR FILM CAPACITOR	CQMA333J50
	C1289	ELECTR.CAPACITOR	CEAS470M25
	C1290−1295	CERAMIC CAPACITOR	CKDYX473M25
	C1296	CERAMIC CAPACITOR	CKDYB102K50

RESISTORS

Mark	No.	Description	Parts No.
	R1286	METAL OXIDE RESISTOR	RS2LMF151J
	R1287,1288	METAL OXIDE RESISTOR	RS3LMF101J
	VR1201,1202	VR	VRTS6HS104
	VR1203	VR	VRTS6VS103
		Other resistors	RD1/8PM□□□J

TUNER ASS'Y (AWE1160)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC431	AM/FM IC	LA1265S
	IC451	MPX IC	AN7470P
	IC471	PLL IC	LM7001
	Q401	MOS-FET	2SK241
	Q402	TRANSISTOR	2SC2786
	Q403	TRANSISTOR	2SC2668
	Q405	N-FET	2SK161
	Q421	TRANSISTOR	2SC2668
	Q451	TRANSISTOR	2SC2603
	Q452,453	TRANSISTOR	2SC1740S
	Q454	TRANSISTOR	2SA933S
	Q471	N-FET	2SK246
	Q472	TRANSISTOR	2SC1740SLN
	Q473,474	TRANSISTOR	RN2201
	D401−403	VARI-CAP DIODE	1SV147
	D431−435	DIODE	1SS252

COILS & TRANSFORMERS

Mark	No.	Description	Parts No.
	F421	CERAMIC FILTER	ATF-107
	F422	CERAMIC FILTER	ATF-119
	F431	CERAMIC FILTER	ATF1042
	F461	FILTER	ATF-164
	L401	COIL	ATC1001
	L402	COIL	ATC1002
	L403	COIL	ATC1004
	L404	COIL	ATC1005
	L405	COIL	ATC1003
	L406,407	AXIAL INDUCTOR	LAU2R2M
	T402	IF TRANSFORMER	ATE-063
	T431	IF TRANSFORMER	ATE1001
	T432	IF TRANSFORMER	ATE1002

CAPACITORS

Mark	No.	Description	Parts No.
	C400	CERAMIC CAPACITOR	CKDYF102Z50
	C401	CERAMIC CAPACITOR	CCDRH330J50
	C402	CERAMIC CAPACITOR	CCDRH390J50
	C403	CERAMIC CAPACITOR	ACG1021
	C404,405	CERAMIC CAPACITOR	CCDRH330J50
	C406	CERAMIC CAPACITOR	CCDCH020C50
	C409	CERAMIC CAPACITOR	ACG1017
	C410−412	CERAMIC CAPACITOR	ACG1021
	C413	CERAMIC CAPACITOR	CCDCH150J50
	C414	CERAMIC CAPACITOR	CCDCH330J50

Mark	No.	Description	Parts No.
	C415	CERAMIC CAPACITOR	CCDCH080D50
	C416	CERAMIC CAPACITOR	CCDTH180J50
	C417	CERAMIC CAPACITOR	CCDCH010C50
	C418,419	CERAMIC CAPACITOR	ACG1021
	C420	ELECTR.CAPACITOR	CEAS100M50
	C421,422	CERAMIC CAPACITOR	ACG1021
	C433	ELECTR.CAPACITOR	CEAS4R7M50
	C435	CERAMIC CAPACITOR	CKCYF472Z50
	C436	CERAMIC CAPACITOR	CKCYX683M25
	C437	ELECTR.CAPACITOR	CEAS100M50
	C438	ELECTR.CAPACITOR	CEAS2R2M50
	C439,440	CERAMIC CAPACITOR	CKCYF223Z50
	C441	CERAMIC CAPACITOR	ACG1022
	C442	ELECTR.CAPACITOR	CEAS0R1M50
	C443	ELECTR.CAPACITOR	CEAS3R3M50
	C444	CERAMIC CAPACITOR	ACG1018
	C445	CERAMIC CAPACITOR	ACG1016
	C446,447	MYLOR FILM CAPACITOR	CQMA561J50
	C451	ELECTR.CAPACITOR	CEAS101M16
	C452	ELECTR.CAPACITOR	CEANP4R7M35
	C453	CERAMIC CAPACITOR	CKCYF473Z50
	C454	CAPACITOR	ACE1039
	C455	ELECTR.CAPACITOR	CEAS3R3M50
	C456	ELECTROLYTIC CAPACIT	CEAS1R5M50
	C457	ELECTR.CAPACITOR	CEASR22M50
	C458	ELECTR.CAPACITOR	CEAS470M16
	C459,460	MYLOR FILM CAPACITOR	CQMA102J50
	C461,462	ELECTR.CAPACITOR	CEAS4R7M50
	C463,464	ELECTR.CAPACITOR	CEAS470M16
	C465	CERAMIC CAPACITOR	ACG1021
	C466	CERAMIC CAPACITOR	CCCSL121J50
	C471	CERAMIC CAPACITOR	ACG1021
	C472	CERAMIC CAPACITOR	ACG1022
	C473	CERAMIC CAPACITOR	ACG1021
	C475	ELECTR.CAPACITOR	CEAS100M50
	C476	CERAMIC CAPACITOR	ACG1021
	C477	CERAMIC CAPACITOR	CKCYF103Z50
	C478	AUDIO FILM CAPACITOR	CFTXA224J50
	C479	CERAMIC CAPACITOR	ACG1025
	C480	CERAMIC CAPACITOR	ACG1021
	C481,482	CERAMIC CAPACITOR	CCDCH150J50
	C483	CERAMIC CAPACITOR	ACG1017
	C484	ELECTR.CAPACITOR	CEAS470M16
	C485	CERAMIC CAPACITOR	ACG1021

RESISTORS

Mark	No.	Description	Parts No.
	VR431	VR(10K)	ACP1025-A
	VR432	VR	VRTS6VS153
	VR451	VR(4.7K)	ACP1024-A
		Other resistors	RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
		ANTENNA TERMINAL 4-P	AKA1014
		AM RF TUNING BLOCK	AXX1011
	X431	CERAMIC RESONATOR	ATF1027
	X471	CRYSTAL RESONATOR	ASS1005

AMP ASS'Y (AWH1009)

AMP ASS'Y (AWH1009) is a part of POWER SUPPLY & U-COM ASS'Y (AWZ2827).

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC601,602	AUDIO IC	PA0045
	Q601,602	TRANSISTOR	2SA979
	Q603,604	TRANSISTOR	2SC2240
	Q605,606	TRANSISTOR	2SA970
	Q607,608	TRANSISTOR	2SA1145
	Q609−612	TRANSISTOR	2SC2705
	Q613,614	TRANSISTOR	2SA1145
	Q661,662	TRANSISTOR	2SC2240
	D601−612	DIODE	1SS252
	D661−666	DIODE	1SS252
	D670−673	ZENER DIODE	RD12ESB

CAPACITORS

Mark	No.	Description	Parts No.
	C601,602	MYLOR FILM CAPACITOR	CQMA102J50
	C603,604	ELECTR.CAPACITOR	CEAS2R2M50
	C605,606	CERAMIC CAPACITOR	CCCSL221K500
	C607,608	ELECTROLYTIC CAPACIT	CEXA471M16
	C609,610	MICA CAPACITOR	CMA100D500
	C611,612	CERAMIC CAPACITOR	CCCSL020C500
	C613,614	CERAMIC CAPACITOR	CCCSL680K500
	C615,616	CERAMIC CAPACITOR	CCCSL151K500
	C617,618	CERAMIC CAPACITOR	CCCSL680K500
	C619−621	CERAMIC CAPACITOR	CCCSL101K500
	C622	CERAMIC CAPACITOR	CCDSL101K500
	C661,662	ELECTROLYTIC CAPACIT	CEANP010M100

RESISTORS

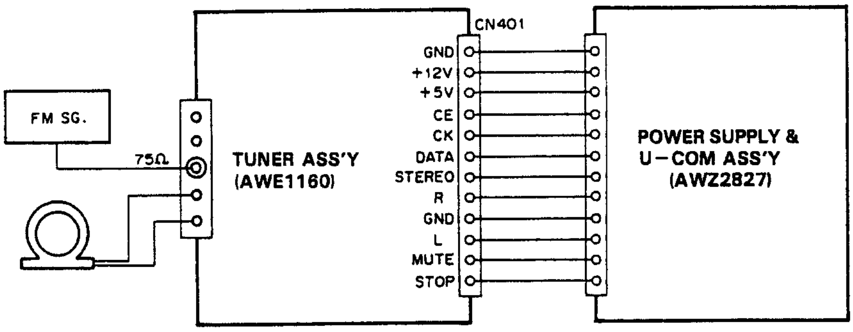
Mark	No.	Description	Parts No.
	R601,602	CARBON FILM RESISTOR	RD1/4PM474J
	R603,604	CARBONFILM RESISTOR	RD1/4PM331J
	R605,606	CARBON FILM RESISTOR	RDR1/4PM393J
	R607,608	CARBON FILM RESISTOR	RD1/4PM472J
	R609,610	CARBONFILM RESISTOR	RD1/4PM331J

Mark	No.	Description	Parts No.
	R611,612	CARBON FILM RESISTOR	RD1/4PM271J
	R613−616	FUSLIBLE RESISTOR	RFA1/4PS101J
	R617,618	CARBON FILM RESISTOR	RDR1/4PM391J
	R619,620	CARBON FILM RESISTOR	RDR1/2PM123J
	R621,622	FUSLIBLE RESISTOR	RFA1/4PS121J
	R623,624	CARBON FILM RESISTOR	RD1/4PM104J
	R625,626	FUSLIBLE RESISTOR	RFA1/4PS470J
	R637−640	CARBON FILM RESISTOR	RD1/4PMF470J
	R641−644	CARBON FILM RESISTOR	RD1/4PMF151J
	R645−648	CARBON FILM RESISTOR	RD1/4PMF821J
	R661−664	CARBON FILM RESISTOR	RD1/4PMF222J
		Other resistors	RD1/8PM□□□J

5. ADJUSTMENTS

5.1 TUNER SECTION

1. Wiring …… Connect the wires as shown in Fig.1 (FM ANT. terminal: 75Ω).
2. Preset …… Set the VR451 to center position.
3. When the SD model is used, set the band select switch to AM:10kHz/FM:100kHz.



FM Section

Note: Stereo modulation: Main 1kHz L+R ±68.25kHz
Pilet 19 kHz ±6.75kHz

Order	Item	SSG			Receiving frequency	Adjustment	
		Frequency	Modulation	Level		Adjustment location	Remarks
1	Checking front end VT	No signal			108MHz	—	Check that the voltage between terminal 41 and ground is 8.7 ±2.0V.
2	Checking front end VT				87.5MHz	—	Check that the voltage between terminal 41 and ground is 3.4±1.5V.
3	Increasing front end sensitivity	98MHz		Weak input	98MHz	L402, L404, T402	Set the voltage between terminal 43 and ground to maximum, and check that the practical sensitivity is as specified.
4	Center adjustment	98MHz		60dBμV	98MHz	L431	Adjust the voltage between terminals 45 and 46 to 0±50mV.
5	Checking monophonic distortion	98MHz	1kHz ±75kHz dev.	60dBμV	98MHz	—	Check that the monophonic distortion is as specified.
6	Adjusting VCO		OFF	60dBμV		VR451	Adjust the output of terminal 44 to 76.0kHz±1.0kHz.
7	Adjusting stereo distortion	98MHz	L−ONLY R−ONLY	60dBμV	98MHz	T402	Minimize the distortion within 1/4 rotation of the core,and check conformity to the specification.
8	Checking separation	98MHz	L−ONLY R−ONLY	60dBμV	98MHz	—	Check that the separation of L→R and R→L is as specified.
9	Checking lighting levels of TUNED and STEREO IND.	98MHz	STEREO		98MHz	—	Check that the lighting levels of TUNED and STEREO IND. are as Specified.

AM Section

Order	Item	SSG			Receiving frequency	Adjustment	
		Frequency	Modulation	Level		Adjustment location	Remarks
1	Checking front end VT	No signal			1700kHz	—	Check that the voltage between terminal 41 and ground is 7.5 ±1.0V.
2	Checking front end VT				530kHz	—	Check that the voltage between terminal 41 and ground is 1.5±0.5V.
3	Checking front end sensitivity	1000kHz	400kHz 30% MOD.	Practical sensitivity level	1000kHz	—	Check that the practical sensitivity (maximum sensitivity) is as specified.
4	Adjusting lighting level of TUNED IND.	1000kHz			1000kHz	VR431	Adjust the lighting level of TUNED IND. to 55dBμV/m ±3dB.

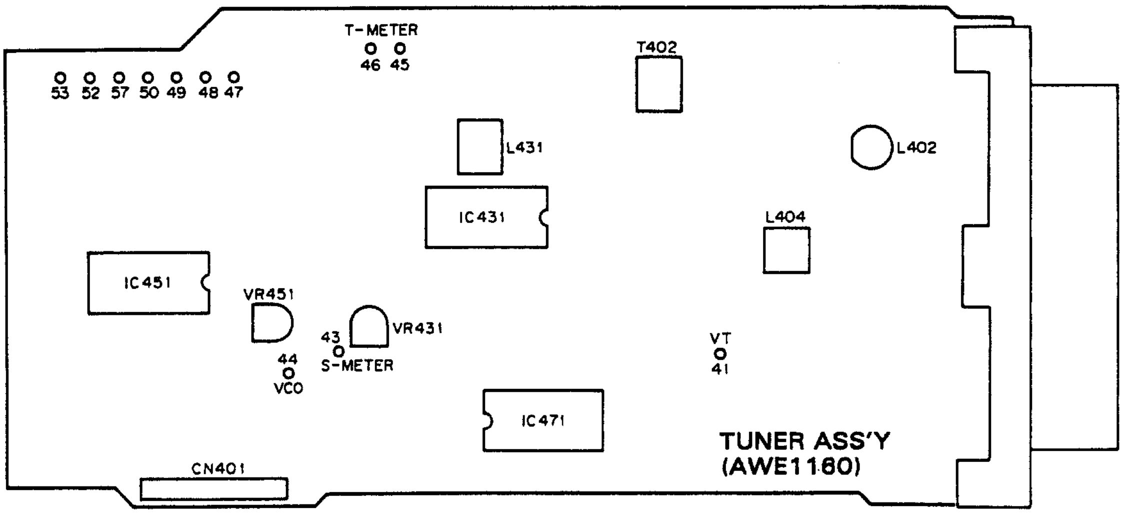

T-METER
46
45
53
52
57
50
49
48
47
T402
L431
L402
IC431
L404
IC451
VR451
43
VR431
VT
41
44
S-METER
VCO
IC471
TUNER ASS'Y
(AWE1160)
CN401

Fig. 6 – 1 adjustment point

5.2 DSP SECTION

Note :
The following instruments are required to conduct precise adjustments. If these instruments are not available, do not turn the semifixed VRs for adjustments.

The required instruments are :
1. Oscilloscope (100MHz)
2. FET probe for oscilloscope
3. Low frequency generators with polarity switching (2 units)
4. Noise meter

• DSP microcomputer assembly

1. Input the non–signal, turn off the direct switch on the front panel of the main unit, and press the theater key of the surround mode switch.

2. Connect the oscilloscope to TP (LRCK) and TP (MCK).

3. First turn VR1107 all the way left (counter–clockwise). Turn VR1107 slowly to the right until the time interval between the 0.5V point on the rising TP (MCK) signal and the 4.5V point on the falling TP (LRCK) signal becomes 50 nsec±5 nsec for the first time (see figure 5–2).

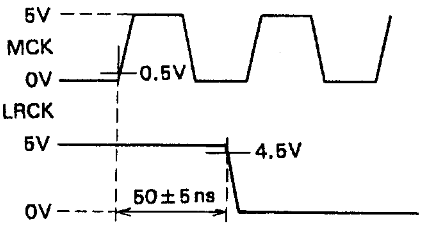


Fig. 5–2

* Use an oscilloscope specified for 100MHz operations with FET probes.

4. L channel offset adjustment 1
Connect the oscilloscope to TP (SHL), and check that the waveform looks like the one in figure 5–3. Next adjust VR1101 so that the lower level of the waveform becomes –0.8V±0.05V.

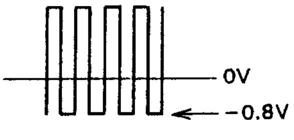


Fig. 5–3

5. R channel offset adjustment 1
As conducted in step 4, adjust VR1102 so that the lower level of the waveform becomes –0.8V±0.05V while observing the TP (SHR) waveform.

6. L channel offset adjustment 2
Apply the 2.5Vrms/400Hz sinusoidal wave to the input terminal of the CD, and connect the oscilloscope to the front amplifier pre–out terminal (Lch). Adjust VR1105 so that the sinusoidal wave is truncated at the top and bottom by the same amount. After that, input the non–signal and make sure whether noise waveforms with amplitudes about 1Vp–p can be seen at TP (MSBL) using the oscilloscope. If the noise cannot be seen, adjust VR1105 carefully until noise waveforms with amplitudes of about 1Vp–p appear.

7. R channel offset adjustment 2
Apply the same signal as in step 6. to the input terminal of the CD. Adjust VR1106 so that the waveform at the pre–out terminal (Rch) is truncated at the top and bottom by the same amount, and then input the non–signal. Adjust VR1106 carefully until noise waveforms with amplitudes of about 1Vp–p appear at TP (MSBR), as done for Lch.

8. Apply the 2Vrms/400Hz sinusoidal wave to the input terminal of the CD, and connect the distortion meter to the front amplifier pre–out terminal (Lch). Adjust VR1103 so that the distortion ratio becomes minimized (about 0.015%).

9. Apply the same signal as in step 8. to the input terminal of the CD, and adjust VR1104 so that the distortion ratio at the pre–out terminal (Rch) is minimized (about 0.015%).

10. Press the dolby pro logic key of the surround mode switch, and input the non–signal. Connect the noise meter to the front amplifier pre–out (Lch), and adjust VR1201 so that the noise level becomes minimized.

11. As done in step 10., adjust VR1202 so that the noise level at the pre–out terminal (Rch) becomes minimized.

12. Apply the sinusoidal wave with 212mVrms/1kHz in the normal phase to the Lch input terminal of the CD and that in the inverted phase to Rch, and adjust VR1203 so that the signal level at TP (dolby) becomes 212mV±10mV.

6. IC INFORMATION

6.1 PD0069B1 : DSP CONTROL

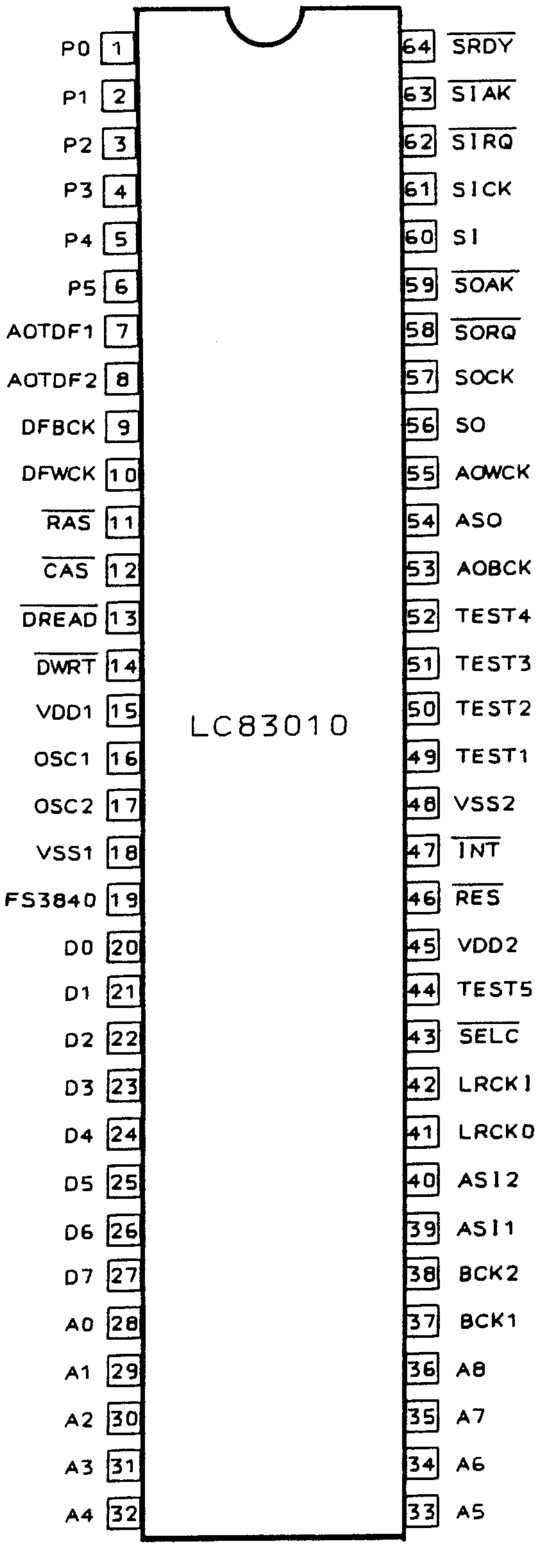
• Terminal function

Pin No.	Pin name	I/O	Description	Active
1	VDD	–	5V	
2	P26	I/O	N.C.	
3	P25		N.C.	
4	P24		ATTB for REAR/CENTER	* 1
5	P23		ATTA for FRONT	
6	P22		ATTA for FRONT	
7	P21		Chip Select (PD0051)	L
8	P20		DATA/ADDRESS (PD0051)	
9	CLK2		CLOCK (PD0051/LA8301)	
10	SO2	O	DATA (PD0051/LA8301)	
11	SI2	I	N.C.	
12	P33	I/O	DRDY (PD0051)	
13	P32		RESET (PD0051)	L
14	P31		N.C.	
15	P30		RQ (CXP80316: PDG0056)	
16	CLK1		CLOCK (CXP80316: PDG0056)	
17	SO1	O	N.C.	
18	SI1	I	DATA (CXP80316: PDG056)	
19	$\overline{\text{INT1}}$		N.C.	
20	CN Vss		N.C.	
21	$\overline{\text{RST}}$		RESET input	L
22	Vss	–	GND	
23	XIN	I	Connected to oscillator (10MHz).	
24	XOUT	O		
25	ϕ OUT	O	N.C.	
26	P17	I/O	SRDY (LA8301)	
27	P16		SITK (LA8301)	
28	P15		STRQ (LA8301)	
29	P14		RESET (LA8301)	
30	P13	I/O	N.C.	
31	P12			
32	P11			
33	P10			
34	P07			
35	P06			
36	P05			
37	P04			
38	P03			
39	P02			
40	P01			
41	P00		ATTB for REAR/CENTER	* 1
42	P27		MUTE	H

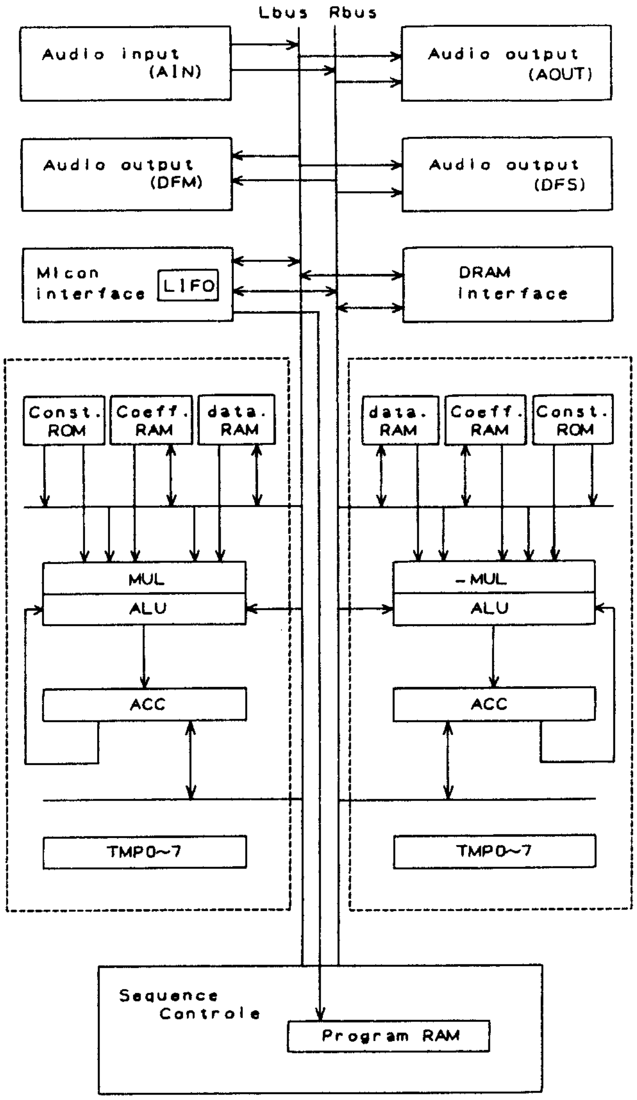
* 1 : Gain control

	ATTA	ATTB
0dB	LOW	LOW
4dB	HIGH	LOW
8dB	LOW	HIGH
10dB	HIGH	HIGH

6.2 LC83010P : DSP


LC83010
1 P0
2 P1
3 P2
4 P3
5 P4
6 P5
7 AOTDF1
8 AOTDF2
9 DFBCK
10 DFWCK
11 RAS
12 CAS
13 DREAD
14 DWRT
15 VDD1
16 OSC1
17 OSC2
18 VSS1
19 FS3840
20 D0
21 D1
22 D2
23 D3
24 D4
25 D5
26 D6
27 D7
28 A0
29 A1
30 A2
31 A3
32 A4
33 A5
34 A6
35 A7
36 A8
37 BCK1
38 BCK2
39 ASI1
40 ASI2
41 LRCK0
42 LRCK1
43 SELC
44 TEST5
45 VDD2
46 RES
47 INT
48 VSS2
49 TEST1
50 TEST2
51 TEST3
52 TEST4
53 AOBCK
54 ASO
55 AOWCK
56 SO
57 SOCK
58 SORQ
59 SOAK
60 SI
61 SICK
62 SIRQ
63 SIAK
64 SRDY

• PIN POSITION


Lbus
Rbus
Audio input (AIN)
Audio output (AOUT)
Audio output (DFM)
Audio output (DFS)
MIcon interface
LIFO
DRAM interface
Const. ROM
Coeff. RAM
data. RAM
data. RAM
Coeff. RAM
Const. ROM
MUL
ALU
MUL
ALU
ACC
ACC
TMP0~7
TMP0~7
Sequence Controle
Program RAM

• BLOCK DIAGRAM

- **Terminal function**

Pin No.	Pin name	I/O	Description
1 | 6	P0 | P5	I/O	General purpose input/output port
7	AOTDF1	O	Serial output pin for audio data (For high presence 1)
8	AOTDF2		Serial output pin for audio data (For high presence 2)
9	DFBCK		Bit clock output pin for AOTDF 1 and 2 (32 fs and 48 fs clocks)
10	DFWCK		Word clock output pin for AOTDF 1 and 2
11	$\overline{\text{RAS}}$		Output pin for RAS signals when accessing the external DRAM
12	$\overline{\text{CAS}}$		Output pin for CAS signals when accessing the external DRAM
13	$\overline{\text{DREAD}}$		Output pin for data read signals when accessing the external DRAM
14	$\overline{\text{DWRT}}$		Output pin for data write signals when accessing the external DRAM
15	VDD1	I	+5V power line pin
16	OSC1		Pin for the crystal oscillator
17	OSC2	O	
18	Vss1	I	Ground pin
19	FS3840	O	Output pin for 384 fs
20 | 27	D0 | D7	I/O	Data input/output pin for an external DRAM
28 | 36	A0 | A8	O	Address input/output pin for an external DRAM
37	BCK1	I	Bit clock pin for ASI 1 input
38	BCK2	I/O	Bit clock pin for ASI 2 input
39	ASI1	I	Pin for serial audio data input 1
40	ASI2		Pin for serial audio data input 2
41	LRCKO	O	Output pin for L/R channel identifier signal (" H " for L channel and " L " for R channel)

Pin No.	Pin name	I/O	Description
42	LRCKI	I	Input pin for L/R channel identifier signal (" H " for L channel and " L " for R channel)
43	$\overline{\text{SELC}}$		Pin for selecting whether L/R channel identifier signal input is taken from the external (LRCKI) or the internal (internal demultiplier)
44	TEST5	O	Test output pin
45	VDD2	I	+5V power line pin
46	$\overline{\text{RES}}$		Reset pin
47	$\overline{\text{INT}}$		Interruption request input pin
48	Vss2		Ground pin
49 | 52	TEST1 | TEST4		Test pin
53	AOBCK	O	Output pin for ASO bit clock (32fs and 48fs clocks)
54	ASO		Output pin for serial audio data
55	AOWCK		Output pin for ASO word clock
56	SO		Output pin for (8-bit) serial data to the controller microcomputer
57	SOCK	I	Input pin for the serial SO clock
58	$\overline{\text{SORQ}}$		Input pin for serial output request signals
59	$\overline{\text{SOAK}}$	O	Output pin indicating serial data being output
60	SI	I	Input pin for (8 bit) serial data from the control microcomputer
61	SICK		Input pin for the serial SI clock
62	$\overline{\text{SIRQ}}$		Input pin for serial input request signals
63	$\overline{\text{SIAK}}$	O	Output pin indicating serial input being executed
64	$\overline{\text{SRDY}}$	I	Input pin for ready signals indicating completion of serial data input from the controller microcomputer.

6.3 PDG055–A : OPERATION CONTROL

- **Terminal function**

Pin No.	Pin name	I/O	Description	Active
1	S4/PG0	O	Segment output	
2	S5/PG1			
3	S6/PG2			
4	S7/PG3			
5	S8			
6	S9			
7	S10			
8	S11			
9	S12			
10	S13			
11	S14			
12	S15			
13	S16/T15			
14	S17/T14			
15	S18/T13			
16	S19/T12			
17	S20/T11			
18	S21/T10			
19	S22/T9		Grid output Key scan output	
20	S23/T8			
21	T7			
22	T6			
23	T5			
24	T4			
25	T3			
26	T2			
27	T1			
28	T0			
29	INT	I		

Pin No.	Pin name	I/O	Description	Active
30	XTAL	–	Connected to ceramic oscilator (4.19MHz)	
31	EXTAL	I		
32	$\overline{RST}$		Reset input (PDG056)	L
33	NC	–		
34	VDD		5V	
35	P10/AD0	I/O	Key scan input	
36	P11/AD1			
37	P12/AD2			
38	P13/AD3			
39	P14/AD4			
40	P15/AD5			
41	P16/AD6			
42	P17/AD7			
43	NC	–		
44	PX0/$\overline{SC}$	I/O	Serial Clock (PDG056, MSC7112)	
45	PX1/SO		Serial Data Out (PDG056, MSC7112)	
46	PX2/SI		Serial Data In (PDG056, MSC7112)	
47	PA0		Main Control IC IRQ (PDG056)	L
48	PA1		Rotary Pulse Encoder input	H
49	PA2		Rotary Pulse Encoder input	H
50	PA3		Input of comparison result	
51	PF0		D/A Rudder R7 MSB Bit	
52	PF1		D/A Rudder R6	
53	PF2		D/A Rudder R5	
54	PF3		D/A Rudder R4	

Pin No.	Pin name	I/O	Description	Active
55	PE0		D/A Rudder R3	
56	PE1		D/A Rudder R2	
57	PE2		D/A Rudder R1	
58	PE3		D/A Rudder R0 LSB Bit	
59	PY0	O		
60	PY1/$\overline{\text{PWM}}$		PWM output (DC for Enhancer)	
61	PY2/WP	I	Remote Control Unit B Check	L
62	PY3/RMC		Remote Control Unit input	L
63	PD0	I/O	Level Meter Mode SW0 (TC4051 A)	
64	PD1		Level Meter Mode SW1 (TC4051 B)	
65	PD2		Level Meter Mode SW2 (TC4051 C)	
66	PD3		FL Driver IC (MSC7112 LOAD)	
67	PC0		Motor Drive IC (TA7291S IN1)	
68	PC1		Motor Drive IC (TA7291S IN2)	
69	PC2		LED for Volume	
70	PC3		Sleep output	L
71	Vss	–	GND	
72	TX		Not used	
73	NC			
74	TEX	I	Not used	
75	VREF	–	5V Pull Up	
76	VFDP		FL Power Supply	
77	S0/PH0	I/O	Segment output	
78	S1/PH1			
79	S2/PH2			
80	S3/PH3			

6.7 PA0045 : NSA

- **Terminal function**

Pin No.	Pin name	Description
1	PNPE	Common current to the negative input of the differential amplifier
2	PC1	Phase compensation
3	PC2	Phase compensation
4	V IN	Input from a signal voltage source
5	PC3	Phase compensation
6	PC4	Phase compensation
7	NPN E	Common current to the positive input of the differential amplifier
8	NICC	Input from a negative current source (substrate)
9	N OUT	Negative current output
10	N REF	Negative voltage compare input
11	C REF	Intermediate voltage compare input
12	P REF	Positive voltage compare input
13	P OUT	Positive current output
14	P ICC	Positive current source input

6.4 PD0055 : DSP

- **Terminal function**

Pin No.	Pin name	I/O	Description
1	VSS 2	–	GND
2	DRSEL	I	Selector pin for logic at DRDY (pin 35). When I/F of the microcomputer can receive data with the " H " level, the logic of DRDY (35 pin) is " H ". When I/F of the microcomputer can receive data with the " L " level, the logic of DRDY (35 pin) is " L ".
3	XIN		Pin for crystal oscillator
4	XOUT	O	
5	EXCK	I	External clock input
6	TEST 1		Test mode pin. Normally open.
7	TEST 2		
8	$\overline{\text{RAS}}$	O	Row address strobe pin for an external DRAM
9	$\overline{\text{WE}}$		Write enable pin for an external DRAM
10	$\overline{\text{OE}}$		Output enable pin for an external DRAM
11	$\overline{\text{CAS}}$		Column address strobe pin for an external DRAM
12 | 15	RAM3IO3 | RAM3IO0	I/O	Data I/O pin for an external DRAM
16 | 19	RAM2IO3 | RAM2IO0		
20 | 23	RAM2IO3 | RAM1IO0		
24 | 31	A0 | A7	O	Address output pin for an external DRAM
32	VSS1	–	GND
33	VDD2		Power supply terminal
34	$\overline{\text{RESET}}$	I	Reset signal input terminal
35	$\overline{\text{DRDY}}$	O	Output pin indicating whether I/F data from the microcomputer can be received. When DRSEL (pin 2) is at the " L " level, this pin indicates receive enable with " L " and receive disable with " H ". When DRSEL (pin 2) is at the " H " level, this pin indicates receive enable with " H " and receive disable with " L ". When CS (pin 39) is at the " H " level, this pin shows high impedance.
36	RDATA	I	Input pin for I/F data from the microcomputer
37	$\overline{\text{RCK}}$		Input pin for I/F clock from the microcomputer
38	A/$\overline{\text{D}}$		Input pin for address/data identifier signals from the interface. " H " for address and " L " for data.
39	$\overline{\text{CS}}$		DASP chip selector input pin. Selected with the " L " level.
40	CK SEL2		Selector pin for the clocks from CKOUT (pin 62)
41	CK SEL1		Selector pin for the master clock frequencies
42	XSEL		Oscillator/external clock selector pin
43	WCK	O	Word clock output terminal
44	64FSOUT2		64 FS bit clock output terminal
45	64FSOUT1		
46	32FSOUT2		32 FS bit clock output pin
47	32FSOUT1		
48	LRCK OUT2		LR clock output pin. Lch when LR CKOUT1 is " H ", and Rch when " L ". Rch when LR CKOUT2 is " H ", and Lch when " L ".
49	LRCK OUT1		
50 | 52	AOUT 3 | AOUT 1		Output pin for Lch/Rch serial audio data

Pin No.	Pin name	I/O	Description
53	LRCKIN2	I	LR clock input pin 2 to receive serial audio data
54	BCKIN2		Bit clock input pin 2 to receive serial audio data
55	AIN 2		Input pin 2 for serial Lch/Rch audio data
56	LRCKIN 1		LR clock input pin 1 to receive serial audio data
57	BCKIN		Bit clock input pin 1 to receive serial audio data
58	AIN1	I	Input pin 1 for serial Lch/Rch audio data
59	ADCLRCK	O	LR clock output pin to A/D converter
60	ADCBCK		Bit clock output pin to A/D converter
61	TEST 3	I	Test mode pin. Normally open.
62	CKOUT	O	Output pin for 3/2 demultiplied frequency of the internal system clock or master clock
63	MOUT		Master clock output pin
64	VDD 1	–	Power supply pin

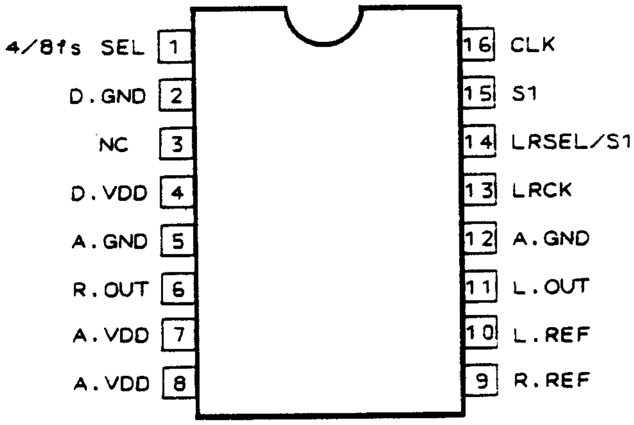
Selection of the master clocks

XSEL (pin 42)	Mout output (pin 63)
L	EXCK output
H	Crystal oscillator output

Selection of internal system clocks

CKSEL 1 (pin 41)	CKSEL 2 (pin 40)	Internal system clock	CKOUT output (pin 62)
L	L	2 frequency demultiplied master clock	3/2 frequency demultiplied master clock
H	L	3 frequency demultiplied master clock	3/2 frequency demultiplied master clock
L	H	2 frequency demultiplied master clock	2 frequency demultiplied master clock
H	H	3 frequency demultiplied master clock	3 frequency demultiplied master clock

6.5 UPD6376CX : D/A CONVERTER



- **Terminal function**

Pin No.	Pin name	I/O	Description
1	4/8fs SEL	I	Lch and Rch data are input from pin 15 in the time−sharing mode when this pin is "low"or "open". When this pin is "high", Lch data are input from the pin 15 and Rch data are input from 14. (It is pulled down by the 100kΩ resistor inside the IC).
2	D. GND	–	Ground pin in the logic section.
3	NC		————————
4	D. VDD		Power supply pin to the logic section.
5	A. GND		External clock input
6	R. OUT	O	Output pin of analog signals at the right side.
7	A. VDD	–	Power supply pin to the analog section.
8	A. VDD		
9	R. REF		Reference voltage pin. This is normally connected to A. GND through a capacitor to reduce the impedance at high frequencies.
10	L. REF		
11	L. OUT	O	Output pin of analog signals at the left side.
12	A. GND	–	Ground pin in the analog section.
13	LRCK/ WDCK	I	When pin 1 is "low", it becomes the input pin for signals used to make the right/left judgment on input data. When pin 1 is "high", it becomes the input pin for signals used to make the word judgment.
14	LRSEL/RSI		When pin 1 is "low"or "open", it selects the left/right polarity for LRCK signals. When the LRCK signal is "high", the LRSEL pin is set to "low"in inputting Lch data. When the LRCK signal is "low", the LRSEL pin is set to "high"in inputting Lch data.
15	SI/LSI		When pin 1 is "low"or "open", this input pin alternately receives serial data in Lch and Rch. When pin 1 is "high", it serves as the input pin of serial Lch data.
16	CLK		Input pin of the read clock for serial input data.

6.8 PDG056－A : SYSTEM CONTROL

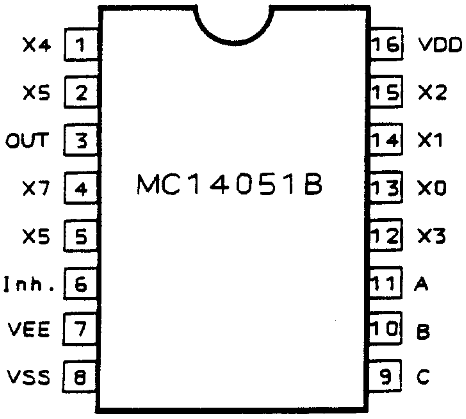
• Terminal function

Pin No.	Pin name	I/O	Description	Active
1	PA7 P－TTUNE	I	TUNED input	↓
2	PA6 P－TMUTE	O	MUTING for TUNER	↑
3	PA5 P－STIN	I	STEREO input	↓
4	PA4 P－LMDT	O	LM7001 Control DATA	
	P－PART1	I	Destination input	
5	PA3 P－LMCK	O	LM7001 Control DATA	
	P－PART2	I	Destination input	
6	PA2 P－LMCE	O	LM7001 Control CE	↑
7	PA1 P－STVC	O	CENTER VOLUME IC (TC9154) Control STROB	↑
8	PA0 P－STVR	O	REAR VOLUME IC (TC9154) Control STROB	↑
9	PB7 P－MUTE1	O	FRONT/CENTER MUTE	↑
10	PB6 P－MS	O	MRS ON/OFF (MRS PRE OUT ON/OFF)	↑
11	PB5 P－TCS2	O	SUB SWITCH IC (TC9164/TC9163) Control STROB	↑
12	PB4 P－TCS1	O	MAIN SWITCH IC (TC9164/TC9163) Control STROB	↑
13	PB3 P－TCD	O	DATA for TC9164/TC9163/TC9154	
14	PB2 P－TCC	O	CLOCK for TC9164/TC9163/TC9154	
15	PB1 P－MUTEM	O	MUTING (PRE OUT output MUTING) for MR	↑
16	PB0 P－C1	O	MAIN VIDUAL SW Control	M.FUNC VCR1, 2 : H Other : L
17	PC7 P－VON1	O	MAIN VIDUAL SW Control	M.FUNC V.FUNC : L A.FUNC : L
18	PC6 P－C2	O	SUB VIDUAL SW Control	S.FUNC VCR1, 2, VDP : H Other : L
19	PC5 P－VON2	O	SUB VIDUAL SW Control	S.FUNC A.FUNC : H V.FUNC : L
20	PC4 P－SON2	O	SUB VIDUAL SW Control	S.FUNC VCR1, 2, VDP : L Other : H
21	PC3 P－VCR3	O	SUB VIDUAL SW Control (REC output control)	FUNCTION VCR1 : L Other : H
22	PC2 P－VCR2	O	SUB VIDUAL SW Control (REC output control)	FUNCTION VCR2 : L Other : H

Pin No.	Pin name	I/O	Description	Active
23	PC1 P−A1	O	MAIN VIDUAL SW Control	M.FUNC VCR1, 3 TV : L Other : H
24	PC0 P−B1	O	MAIN VIDUAL SW Control	M.FUNC VCR2, 3 TV : H Other : L
25	PD7 P−A2	O	SUB VIDUAL SW Control	S.FUNC VCR1, 3 TV : L Other : H
26	PD6 P−B2	O	SUB VIDUAL SW Control	S.FUNC VCR2, 3 TV : H Other : L
27	PD5 P−SOFF1	O	MAIN VIDUAL SW Control	M.FUNC VCR1, 2, 3 VDP : L Other : H
28	PD4 P−ADPT	O	ADPTOR ON/OFF Switching (Input control)	↑
29	PD3 P−SOUR	O	REC Output Control (SOURCE)	↓
30	PD2 P−ENH	O	ENHANCER ON/OFF Switching	↑
31	PD1 P−SPLIT	O	SPLIT SCREEN ON/OFF Switching	↓
32	Vss GND			
33	PD0	I	N.C.	
34	XTAL		Connected to cramic oscilator (8.00MHz)	
35	EXTAL			
36	RESET	I	RESET Input	↓
37	PE7	I	N.C.	
38	PE6 P−FLR	O	Display U−COM (PDG055 (CXP5058)) RESET Control	↓
39	PE5	I	N.C.	
40	PE4 SO	O	Display U−COM (PDG055 (CXP5058)) SERIAL DATA OUT Control	
41	PE3 SI	I	Display U−COM (PDG055 (CXP5058)) SERIAL DATA IN Control	
42	PE2 SCK	O	Display U−COM (PDG055 (CXP5058)) SERIAL CLOCK OUT Control	
43	PE1	I	N.C.	
44	PE0	I	N.C.	
45	PF7 P−FLRQ	O	Display U−COM (PDG055 (CXP5058)) REQUEST Control	↓
46	PF6 P−5V	O	5V ON/OFF SW (DSP BLOCK 5V)	↑
47	PF5 P−MUTER	O	REAR Output MUTING	
48	PF4	I	N.C.	

Pin No.	Pin name	I/O	Description	Active
49	PF3	I	N.C.	
50	PF2 P-PDRQ	O	DSP U-COM (PD0069A1) REQUEST Control	↓
51	PF1 P-PDCK	O	DSP U-COM (PD0069A1) CLOCK OUT Control	
52	PF0 P-PDDT	O	DSP U-COM (PD0069A1) DATA OUT Control	
53	PG7 P-PDRES	O	DSP U-COM (PD0069A1) DATA OUT Control	↓
54	PG6 P-PRY	O	POWER RELAY ON/OFF	↑
55	PG5 P-AC	I	POWER RELAY ON/OFF	↑
56	PG4 P-MRRY	O	MR POWER RELAY ON/OFF	↑
57	PG3 P-SPC	O	CENTER SPEAKER ON/OFF	↑
58	PG2 P-SPB	O	SPEAKER B ON/OFF	↑
59	PG1 P-SPA	O	SPEAKER A ON/OFF	↑
60	PG0 P-SPR	O	REAR SPEAKER ON/OFF	↑
61	MP GND			
62	Vss GND			
63				
64	Vdd		5V	

6.6 MC14051B


X4 1
X5 2
OUT 3
X7 4
X5 5
Inh. 6
VEE 7
VSS 8
16 VDD
15 X2
14 X1
13 X0
12 X3
11 A
10 B
9 C
MC14051B

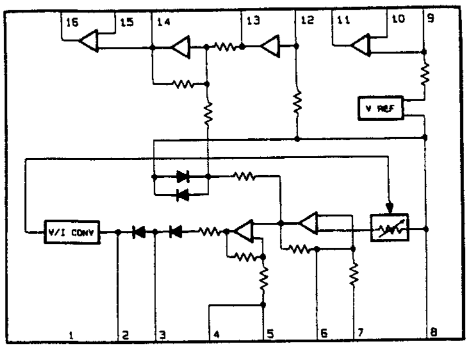
• Terminal function

Control inputs				ON Switches
	Select			
Inhibit	C	B	A	MC14051B
0	0	0	0	X0
0	0	0	1	X1
0	0	1	0	X2
0	0	1	1	X3
0	1	0	0	X4
0	1	0	1	X5
0	1	1	0	X6
0	1	1	1	X7
1	*	*	*	None

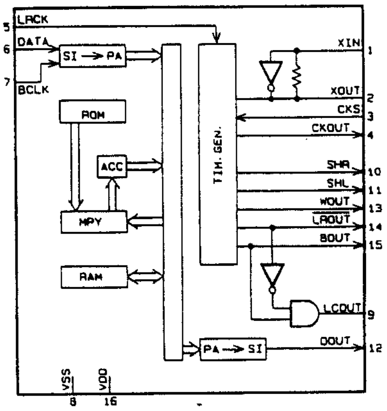
* Don't Care

• BLOCK DIAGRAM of each IC

LA2730 DAC Ass' y (Page 24)

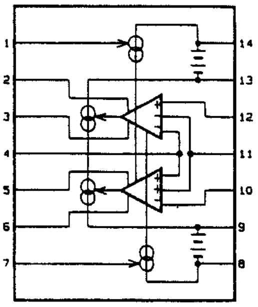

V REF
V/I CONV
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

PD0029 DAC Ass' y (Page 23)

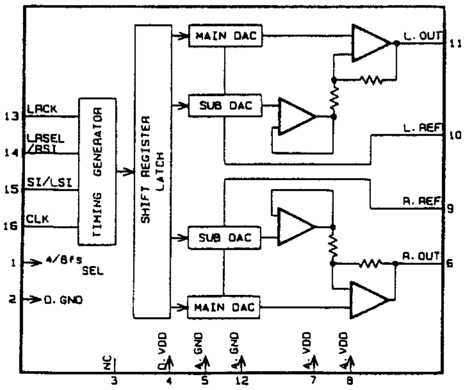

LRCK
DATA
BCLK
SI → PA
ROM
ACC
MPY
RAM
TIM. GEN.
PA → SI
XIN
XOUT
CKS
CKOUT
SHR
SHL
WOUT
LROUT
BOUT
LCOUT
DOUT
VSS
VDD

FRONT AMP Ass' y (Page 66)
CENTER AMP Ass' y (Page 56)

PA0045

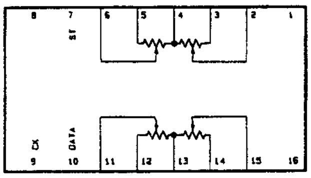

1
2
3
4
5
6
7
8
9
10
11
12
13
14

UPD6376CX DAC Ass' y (Page 23)


LRCK
LRSEL/RSI
SI/LSI
CLK
4/8fs SEL
D. GND
TIMING GENERATOR
SHIFT REGISTER LATCH
MAIN DAC
SUB DAC
SUB DAC
MAIN DAC
L. OUT
L. REF
R. REF
R. OUT
NC
D. VDD
A. GND
A. GND
A. VDD
A. VDD

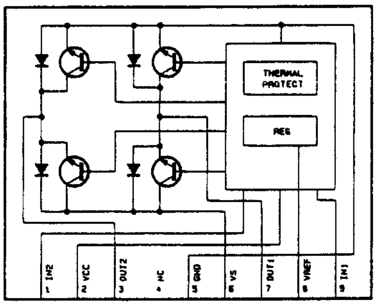
MOTOR VOLUME Ass' y (Page 42)

TC9154AP



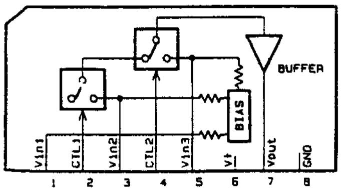
MOTOR VOLUME Ass' y (Page 41)

TA7291S


THERMAL PROTECT
REG
IN2
VCC
OUT2
NC
GND
VS
OUT1
VREF
IN1

VIDEO FUNCTION Ass' y (Page 17)

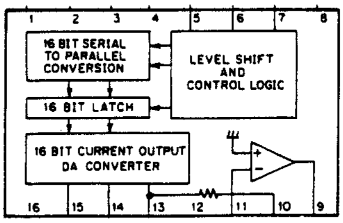
NJM2234L


BUFFER
BIAS
Vin1
CTL1
Vin2
CTL2
Vin3
V+
Vout
GND

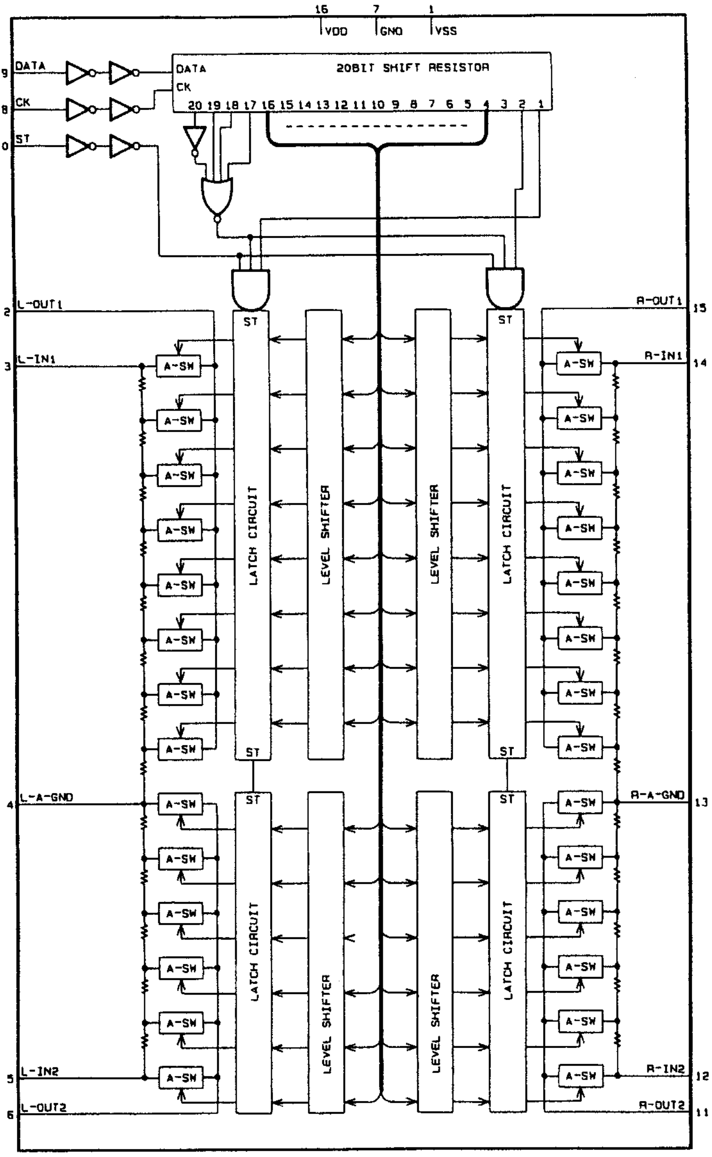
INPUT SIGNAL		OUTPUT SIGNAL
CTL1 (2 PIN)	CTRL2 (4 PIN)	V OUT (7 PIN)
L	L	Vin1(1 PIN)
H	L	Vin2(3 PIN)
L/H	H	Vin3(5 PIN)

DAC Ass' y (Page 23)

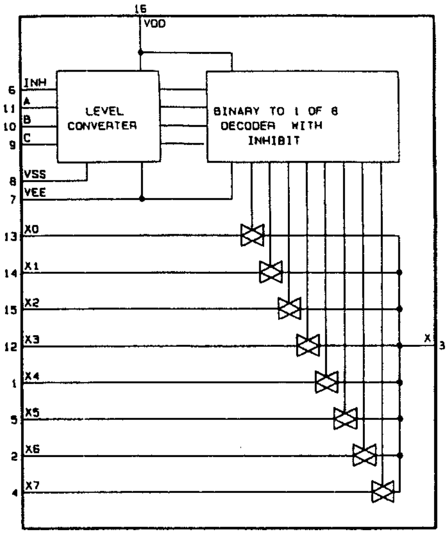
PCM56P


16 BIT SERIAL TO PARALLEL CONVERSION
LEVEL SHIFT AND CONTROL LOGIC
16 BIT LATCH
16 BIT CURRENT OUTPUT DA CONVERTER

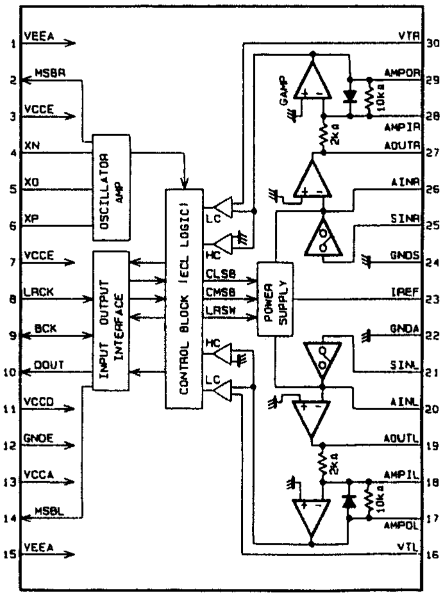
TC9176P PS. U-COM. Ass'y (Page 69)


16 VDD
7 GND
1 VSS
9 DATA
8 CK
10 ST
DATA
CK
20BIT SHIFT RESISTOR
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
2 L-OUT1
3 L-IN1
4 L-A-GND
5 L-IN2
6 L-OUT2
A-SW
ST
LATCH CIRCUIT
LEVEL SHIFTER
R-OUT1 15
R-IN1 14
R-A-GND 13
R-IN2 12
R-OUT2 11

MC14051B FRONT CONTROL Ass'y (Page 40)


16 VDD
6 INH
11 A
10 B
9 C
8 VSS
7 VEE
LEVEL CONVERTER
BINARY TO 1 OF 8 DECODER WITH INHIBIT
13 X0
14 X1
15 X2
12 X3
1 X4
5 X5
2 X6
4 X7
X 3

TD6726N DSP. U-COM. Ass'y (Page 21)


1 VEEA
2 MSBR
3 VCCE
4 XN
5 XO
6 XP
7 VCCE
8 LRCK
9 BCK
10 DOUT
11 VCCD
12 GNDE
13 VCCA
14 MSBL
15 VEEA
OSCILLATOR AMP
INPUT OUTPUT INTERFACE
CONTROL BLOCK (ECL LOGIC)
LC
HC
CLSB
CMSB
LRSW
POWER SUPPLY
GAMP
10kΩ
2kΩ
VTR 30
AMPOR 29
AMPIR 28
AOUTR 27
AINR 26
SINR 25
GNDS 24
IREF 23
GNDA 22
SINL 21
AINL 20
AOUTL 19
AMPIL 18
AMPOL 17
VTL 16

7. REMOTE CONTROL UNIT (CU−VSX014 : AXD1167)

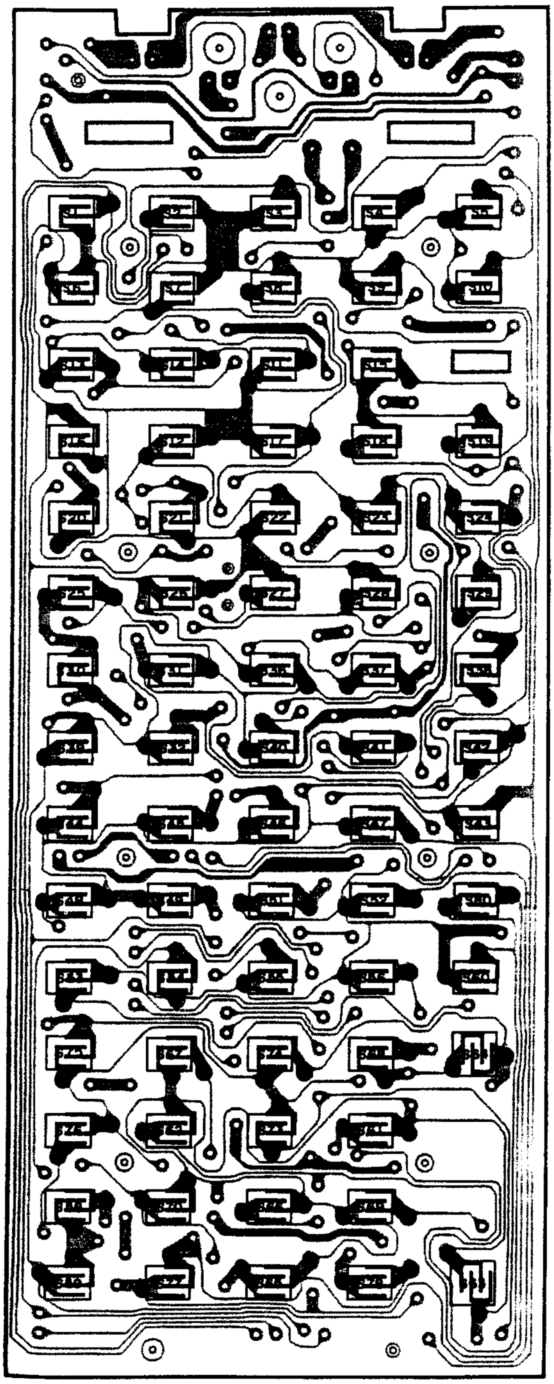
7.1 P.C.BOARD PATTERN

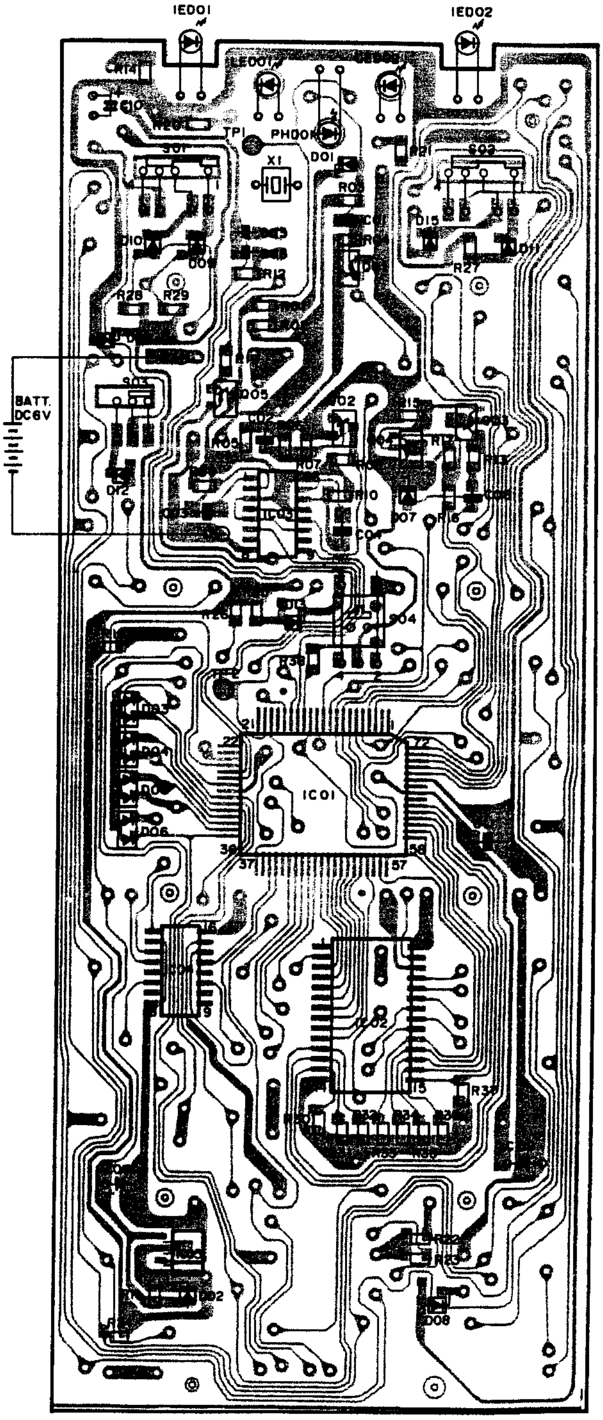
–▭– : Indicates a chip resistor.

–▮– : Indicates a chip capacitor.

⊡ : Indicates a chip transistor.

–▶|– : Indicates a chip diode.




IED01
IED02
LED01
LED02
CR14
TP1
PH001
D01
X1
R20
301
302
R31
D15
D11
R27
D10
D09
R28
R29
BATT.
DC6V
303
D05
D02
D12
R05
R07
R10
R17
D07
R16
C04
IC03
R26
R30
904
D03
D04
D06
IC01
22
21
72
38
37
57
58
IC04
16
9
IC02
15
R37
R23
R22
D08
D02

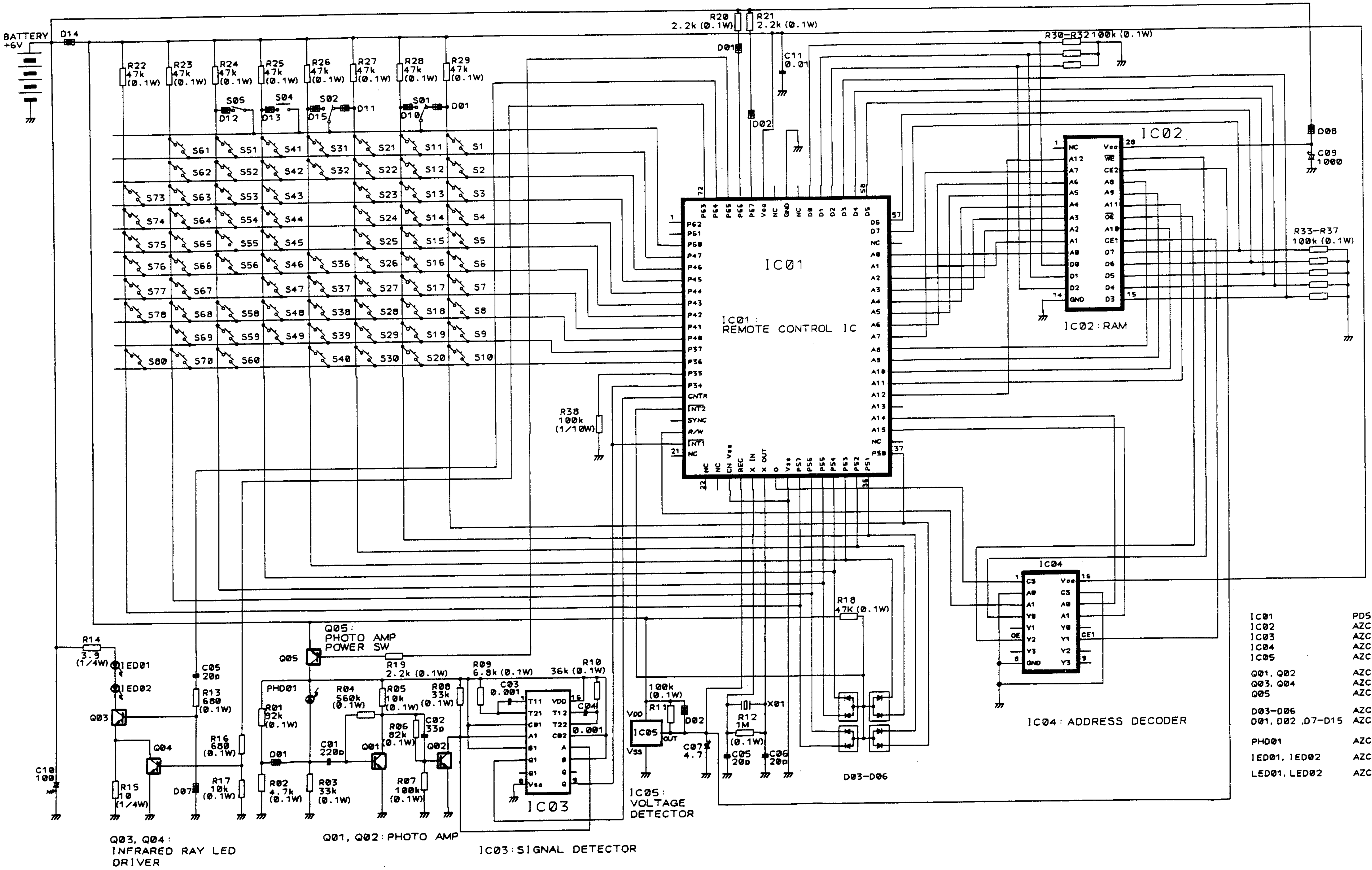
7.2 SCHEMATIC DIAGRAM

1. RESISTORS:
Indicated in Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
⚹ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.


BATTERY +6V
D14
R22 47k (0.1W)
R23 47k (0.1W)
R24 47k (0.1W)
R25 47k (0.1W)
R26 47k (0.1W)
R27 47k (0.1W)
R28 47k (0.1W)
R29 47k (0.1W)
S05
S04
S02
S01
D12
D13
D15
D11
D10
D01
R20 2.2k (0.1W)
R21 2.2k (0.1W)
D09
C11 0.01
D02
R30–R32 100k (0.1W)
D08
C09 1000
IC02
IC01
IC01 : REMOTE CONTROL IC
IC02 : RAM
R33–R37 100k (0.1W)
R38 100k (1/10W)
IC04
R18 47K (0.1W)
IC04 : ADDRESS DECODER
Q05 : PHOTO AMP POWER SW
R14 3.9 (1/4W)
IED01
IED02
C05 20p
R13 680 (0.1W)
Q03
Q04
R16 680 (0.1W)
R15 10 (1/4W)
D07
R17 10k (0.1W)
C10 100
PHD01
R01 82k (0.1W)
D01
R02 4.7k (0.1W)
R03 33k (0.1W)
R04 560k (0.1W)
R05 10k (0.1W)
R06 82k (0.1W)
R07 100k (0.1W)
R08 33k (0.1W)
C01 220p
C02 33p
Q01
Q02
R19 2.2k (0.1W)
R09 6.8k (0.1W)
C03 0.001
R10 36k (0.1W)
C04 0.001
IC03
R11 100k (0.1W)
IC05
D02
C07 4.7
R12 1M (0.1W)
X01
C05 20p
C06 20p
D03–D06
Q03, Q04 : INFRARED RAY LED DRIVER
Q01, Q02 : PHOTO AMP
IC03 : SIGNAL DETECTOR
IC05 : VOLTAGE DETECTOR

IC01	PD5148 A
IC02	AZC1045
IC03	AZC1046
IC04	AZC1047
IC05	AZC1048
Q01, Q02	AZC1050
Q03, Q04	AZC1051
Q05	AZC1052
D03–D06	AZC1049
D01, D02 ,D7–D15	AZC1233
PHD01	AZC1055
IED01, IED02	AZC1053
LED01, LED02	AZC1054

The underline indicates the switch position

S01 : AUDIO／VIDEO／AUX
S02 : SR RECALL／USE／LEARN
S05 : DECK Ⅰ／DECK Ⅱ
S04 : RESET
TAPE／VCR
S–1 : VCR POWER
S–2 : ● TAPE／VCR
S–3 : ❚❚ TAPE／VCR
S–4 : O／VCR CH–
S–5 : VCR CH+
S–6 : ◀◀
S–7 : ◀／ANT/ TV/VCR
S–8 : ■
S–9 : ▶
S–10 : ▶▶
CD／VDP
S–11 : DISC SEL /DISPLAY CALL
S–12 : ❚❚
S–13 : ⏮ CHP/FR–TM
S–14 : ⏭ /SEARCH
S–15 : PROG
S–16 : ◀◀
S–17 : ■
S–18 : ▶
S–19 ▶▶
TUNER／CD／TV／VDP
S–20 : 1／13
S–21 : 2／14
S–22 : 3／15
S–23 : 4／16
S–24 : 5／17
S–25 : 6／18
S–26 : 7／19
S–27 : 8／20
S–28 9／21
S–29 : 0. 10／22
S–30 : 11／MEMORY／23
S–31 : 12／CLEAR／24
TUNER／CD／PHONO／AMP／TV
S–32 : BAND／DUAL

S–36 : 1·12／13·24／CH–RETURN
S–37 : FREQUENCY–／TV CHANNEL–
S–38 : FREQUENCY+／TV CHANNEL+
S–39 : TV POWER
S–40 : CD+10／TV FUNC CYCLIC
S–41 : PHONO■／TV VOL–
S–42 : PHONO▶／TV VOL+
S–43 : AMP DISPLAY/TV DISPLAY
S–44 : VCR 1
S–45 : VCR 2
S–46 : VCR 3
S–47 : VDP
S–48 : TV
S–49 : VIDEO

S–51 : TAPE 1／DAT
S–52 : TAPE 2
S–53 : LINE
S–54 : CD
S–55 : TUNER
S–56 : PHONO

S–58 : SLEEP
S–59 : RECEIVER POWER
S–60 : MUTING
S–61 : FRONT BAL.R
S–62 : FRONT BAL.L
S–63 : MASTER VOLUME–
S–64 : MASTER VOLUME+
S–65 : REAR LEVEL–
S–66 : REAR LEVEL+
S–67 : SURROUND MODE
S–68 : SURROUND DELAY TIME
S–69 : REAR BAL.R
S–70 : REAR BAL.L

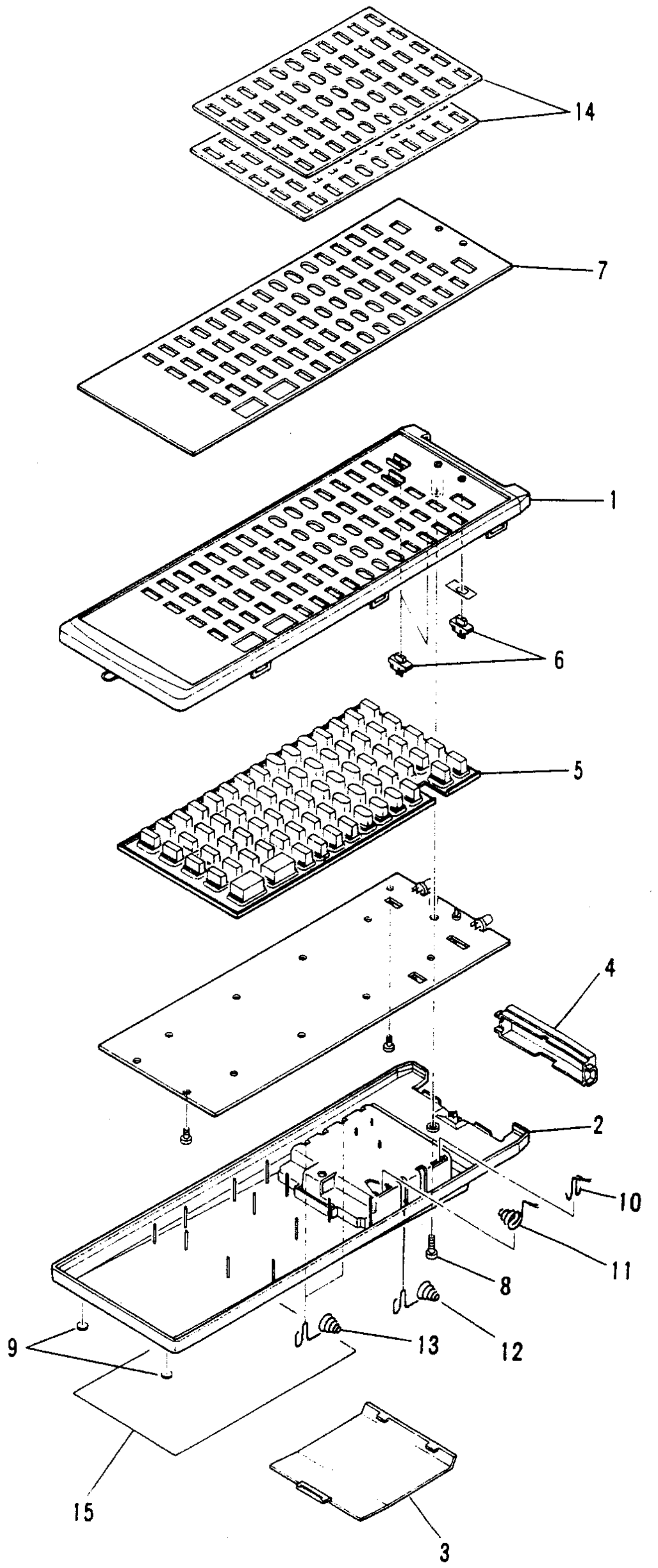
S–73 : CENTER LEVEL–
S–74 : CENTER LEVEL+
S–75 : SOUND FIELD
S–76 : ACOUSTIC
S–77 : SP–A
S–78 : SP–B

S–80 : RETURN

7.3 EXPLODED VIEWS AND PARTS LIST

Parts list of remote control unit

Mark	No.	Parts No.	Description
	1	AZH1033	Case(A)
	2	AZH1034	Case(B)
	3	AZH1035	Case(C)
	4	AZN1400	Filter
	5	AZA1271	Rubber sheet
	6	AZS1042	Knob
	7	AZA1270	Name plate
	8	AZB1124	Screw
	9	AZN1401	Leg
	10	AZB1274	Electrode spring
	11	AZB1275	Electrode spring
	12	AZB1276	Electrode spring
	13	AZB1277	Electrode spring
	14	AAK1439	Sheet
	15	AZA1273	Label



7.4 ELECTRICAL PARTS LIST

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω 56×10^1 561..........................RD1/4PS 5 6 1 J
47kΩ 47×10^3 473..........................RD1/4PS 4 7 3 J
0.5Ω 0R5..RN2H 0 R 5 K
1Ω 010..RS1P 0 1 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ 562×10^1 5621........................RN1/4SR 5 6 2 1 F

SEMCONDUCTORS

Mark	Symbol & Description	Part No.
	IC01	PD5148A
	IC02	AZC1045
	IC03	AZC1046
	IC04	AZC1047
	IC05	AZC1048
	Q1,Q2	AZC1050
	Q3,Q4	AZC1051
	Q5	AZC1052
	D01,D02,D07−D15	AZC1233
	D03−D06	AZC1049
	PHD01	AZC1055
	LED01,LED02	AZC1054
	IED01,IED02	AZC1053

SWITCHES

Mark	Symbol & Description	Part No.
	S01,S02 Slide switch	AZC1079
	S04 Slide switch	AZC1081
	S05 Slide switch	AZC1080

CAPACITORS

Mark	Symbol & Description	Part No.
	C01 (220p)	AZC1058
	C02 (33p)	AZC1059
	C05,C06 (20p)	AZC1060
	C08 (0.01μF)	AZC1061
	C03,C04 (0.001μF)	AZC1062
	C11 (0.01μF)	AZC1063
	C10 (100μF)	AZC1251
	C07 (4.7μF)	AZC1252
	C09 (1000μF)	AZC1255

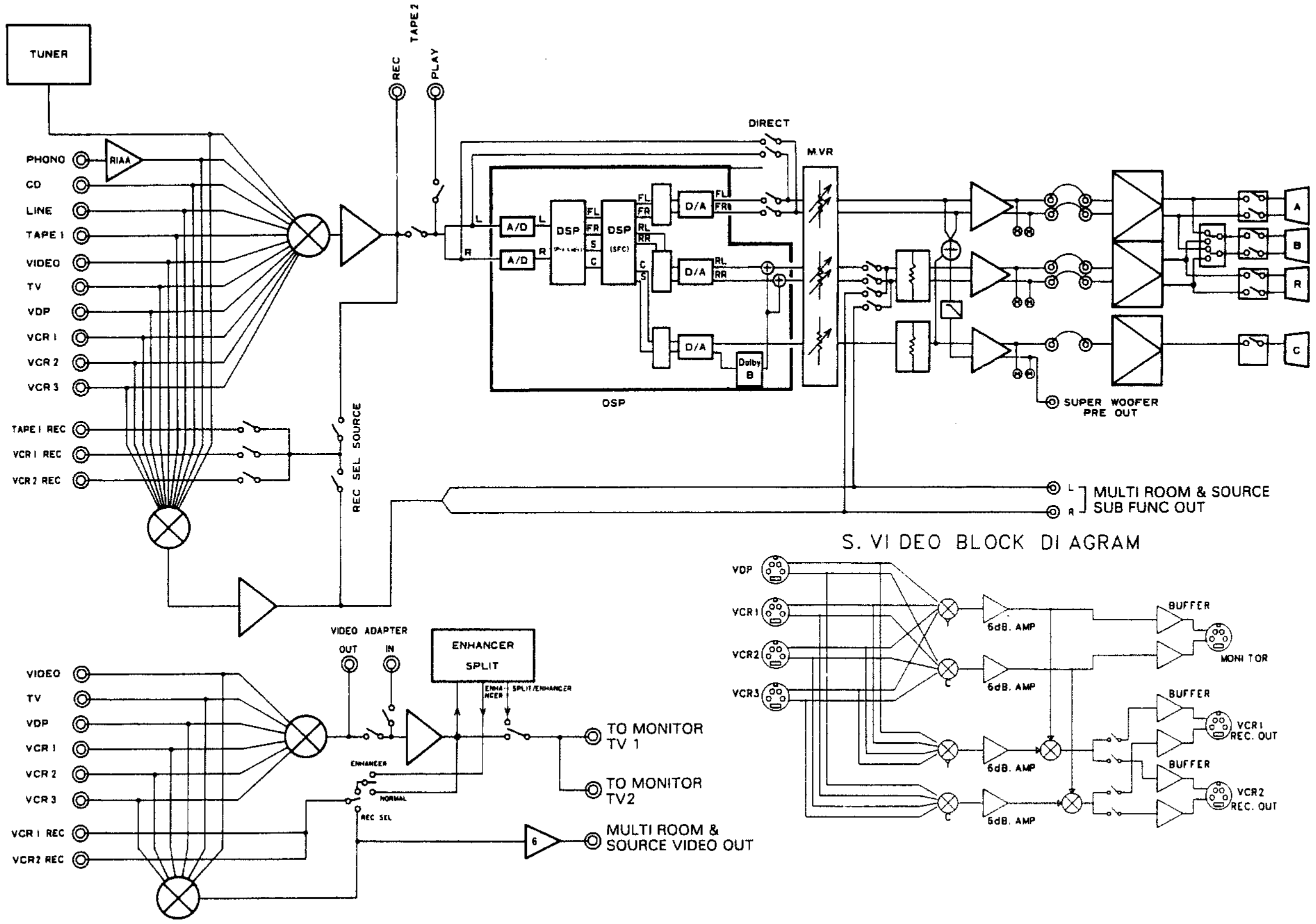
RESISTORS

Mark	Symbol & Description	Part No.
	R01 (8.2k)	AZC1064
	R02 (4.7k)	AZC1065
	R03,R08 (33k)	AZC1066
	R05,R17 (10k)	AZC1068
	R06 (82k)	AZC1069
	R09 (6.8k)	AZC1070
	R10 (56k)	AZC1071
	R12 (1M)	AZC1072
	R07,R11,R30−R38 (100k)	AZC1073
	R19−R21 (2.2k)	AZC1074
	R13,R16 (680Ω)	AZC1075
	R15 (10Ω)	AZC1076
	R18,R22−R29 (47k)	AZC1077
	R14 (3.9Ω)	AZC1078
	R04 (560k)	AZC1256

OTHERS

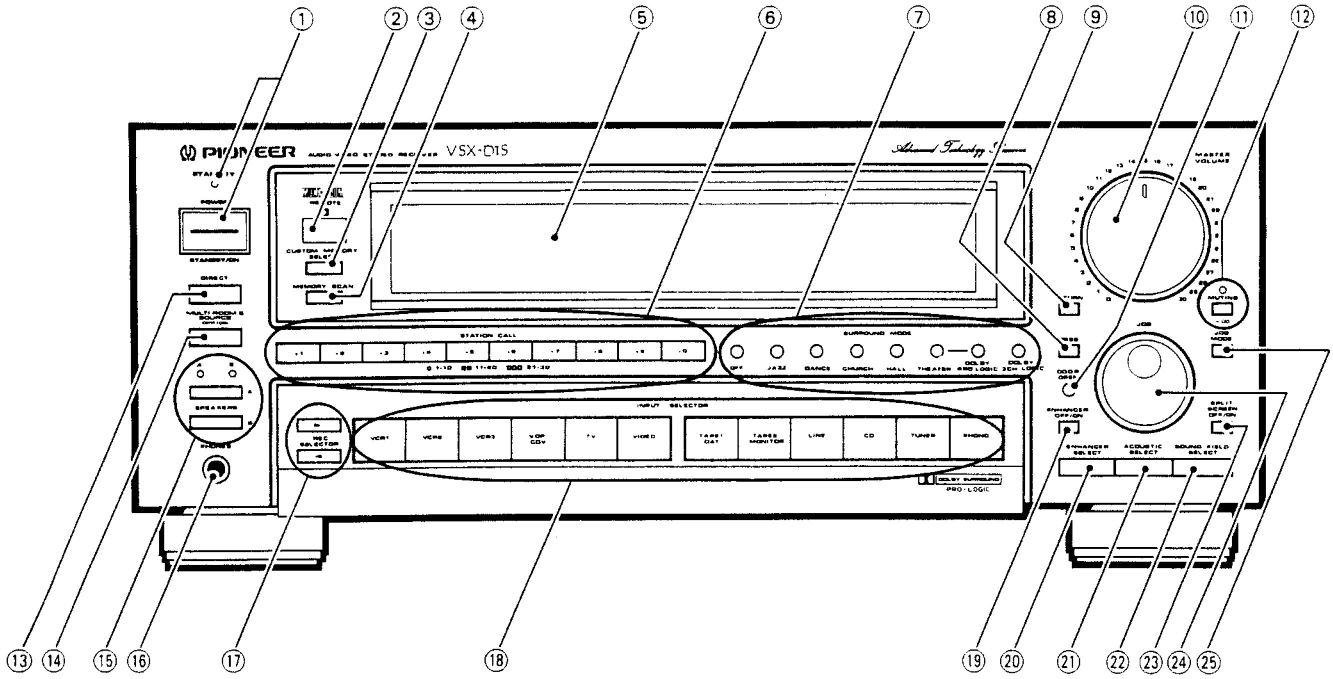
Mark	Symbol & Description	Part No.
	X01 Resonator	AZC1057

8. BLOCK DIAGRAM


TUNER
PHONO
RIAA
CD
LINE
TAPE 1
VIDEO
TV
VDP
VCR 1
VCR 2
VCR 3
TAPE 1 REC
VCR 1 REC
VCR 2 REC
REC
PLAY
TAPE 2
REC SEL SOURCE
DIRECT
L
R
A/D
DSP
(Pro Logic)
DSP
(SFC)
FL
FR
S
C
RL
RR
D/A
Dolby B
DSP
M.VR
A
B
R
C
SUPER WOOFER PRE OUT
L
R
MULTI ROOM & SOURCE SUB FUNC OUT
VIDEO
TV
VDP
VCR 1
VCR 2
VCR 3
VCR 1 REC
VCR 2 REC
VIDEO ADAPTER
OUT
IN
ENHANCER
SPLIT
ENHANCER
SPLIT/ENHANCER
ENHANCER
NORMAL
REC SEL
TO MONITOR TV 1
TO MONITOR TV2
6
MULTI ROOM & SOURCE VIDEO OUT
S. VIDEO BLOCK DIAGRAM
VDP
VCR1
VCR2
VCR3
Y
C
6dB. AMP
BUFFER
MONITOR
VCR1 REC. OUT
VCR2 REC. OUT

9. PANEL FACILITIES

FRONT PANEL FACILITIES



① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

ON .... When set to the ON position, power is supplied and the unit becomes operational.

STANDBY .. When set to STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

The STANDBY indicator lights when the power is STANDBY, and goes out during ON.

② Remote sensor window

③ CUSTOM MEMORY SELECT switch

Recall a genre name with this switch.

④ MEMORY SCAN switch

Operates when the INPUT SELECTOR is set to TUNER. Station frequencies assigned to the STATION CALL switches are tuned in, one after another, beginning with the current station no., for approximately 5 seconds each. The display section SCAN indicator will light. Press the switch again and the tuner remains tuned in to the station playing when the switch was pressed the second time.

Station frequencies not assigned station numbers in the memory are skipped.

When you have selected a CUSTOM MEMORY genre, memory scan is performed on the stations in that genre.

⑤ Display section

⑥ STATION CALL (RANDOM 30 CH) switches

- These switches are used to preset and recall desired broadcasting stations, "AUTO/MONO" switch setting.

Station call operation example:

If you press the $\boxed{*2}$ key:

- One time – station 2 is selected.
- Two times – station 12 is selected.
- Three times – station 22 is selected.

NOTE:

Pressing the STATION CALL switches when a component other than TUNER is selected causes the INPUT SELECTOR setting to switch to TUNER.

- They are also used when performing direct access tuning.

⑦ SURROUND MODE switches

⑧ DSSS (Digital Simulated Stereo System) switch

Operate this when inputting a monaural signal to enjoy a simulated stereo sound. You can use it when a monaural signal is input into both the left and right channels or when a monaural signal is input into only one of the channels.

⑨ RETURN switch

Pressing this switch returns the receiver to the following settings, the sound level being controlled by MASTER VOLUME control knob.

• TAPE 2 MONITOR	OFF
• SURROUND MODE	OFF
• SPEAKERS A	ON
• MUTING	OFF
• BALANCE	CENTER
• INPUT SELECTOR	TUNER
• STATION CALL	1 CH *
• VIDEO ADAPTOR	OFF

* When a station is not memorized in 1 CH, station search will automatically proceed from the frequency displayed.

⑩ MASTER VOLUME control

Use to adjust the sound volume from the front, center and rear speakers. When you adjust volume by remote control, the indicator above the knob flashes.

When the MULTI ROOM & SOURCE switch is ON, volume level in room B cannot be adjusted with this knob. Adjust the volume by remote control.

⑪ DOOR OPEN switch

Use to open the hinged panel door.

⑫ MUTING switch/indicator

Press to temporarily cut off the sound volume. The indicator will flash. When pressed again, the sound will return to its previous level.

⑬ DIRECT switch

Press this to listen to source sound without passing the audio signal through sound quality or balance adjusting circuitry.
The surround mode, center mono, and rear and center speakers are automatically switched off.

⑭ MULTI ROOM & SOURCE switch

Use in combination with the separately sold MR-100 Multi-Room remote control unit.
When this switch is on, the REC SELECTOR switch operates as a sub-function selector. The selected sub-function's sound is output through SPEAKERS B, and the video signal is output through the MULTI-ROOM & SOURCE VIDEO OUT jack. If you install speaker systems connected to the SPEAKERS B terminals in a different room, you can enjoy different sources in two different rooms with a single main unit.

⑮ SPEAKERS A, B switches/indicators

These are ON/OFF switches for the speaker systems. Indicators light when the speakers are ON.

⑯ PHONES jack

Connect the plug on your headphones to this jack. To only hear through the headphones, set all SPEAKERS A and B switches to the OFF position.

NOTE:
There are no ON/OFF switches for the rear and center speakers, so when you want to listen only on headphones, switch surround OFF. If you want to listen with surround ON, reduce rear and center volume levels.

⑰ REC SELECTOR switches

You can select the component to be recorded on TAPE 1, VCR 1, VCR 2 without using with the INPUT SELECTOR. Press a REC SELECTOR switch and REC SEL lights in the display section, showing the same component selected with the INPUT SELECTOR.
Each time you press the " ► " switch, the components change in the following order.

→ TUNER → PHONO → VCR 1* → VCR 2* → VCR 3 → VDP
CD ← LINE ← TAPE 1* ← VIDEO ← TV ←

Press the " ◄ " switch and they change in the opposite order. When the REC SELECTOR has been through all the components once, REC SELECTOR switches off. REC SELECTOR also switches off if the " ◄ " and " ► " switches are pressed at the same time.

* You can record audio and video in the following ways.
From TAPE 1 on VCR 1 and 2, from VCR 1 on VCR 2 and TAPE 1, and from VCR 2 on VCR 1 and TAPE 1.
Do not select the component you wish to record on (for example, VCR 1), with the REC SELECTOR.

⑱ INPUT SELECTOR switches

- **Video input selector**

VCR 1: Press when performing playback on a first VCR unit.
VCR 2: Press when performing playback on a second VCR unit.
VCR 3: Press when performing playback on a third VCR unit.
VDP/CDV: Press when performing playback on a video disc player (VDP) or Compatible Laserdisc player.
TV: Press to watch TV broadcasts from the TV tuner connected to the rear panel TV IN jacks.
VIDEO: Press when performing playback on a VCR connected to VIDEO IN jack.

- **Audio input selector**

TAPE 1/DAT: Press when performing playback on a DAT or cassette deck.
TAPE 2 MONITOR: Press when performing playback on a second cassette deck.
LINE: Press when performing playback on an audio component connected to the LINE IN jacks.
CD: Press when playing compact discs on a CD player.
TUNER: Press when listening to radio broadcasts.
PHONO: Press when playing records on a turntable.

NOTE:
- *You cannot use these switches when the hinged panel door is open, so use the FUNCTION switch ❻ to change the input selector selection.*
- *Because of the digital processing performed by this unit's Digital Signal Processor, high level input may result in distortion. This is particularly true when using a turntable with a high output cartridge. In this case, adjust the volume level with the PHONO LEVEL control on the rear panel so that it is the same as other inputs.*

⑲ ENHANCER OFF/ON

Use to switch the video enhancer effect ON/OFF during playback or recording of a video.
When it is switched ON, adjust the degree of effect with the JOG dial ㉔.
If you turn ON the SPLIT SCREEN OFF/ON switch ㉓, the right half of the screen shows a picture with the enhancer ON, and the left half of the screen shows a picture with the enhancer OFF.
The enhancer has no effect on S jack video signals.

⑳ ENHANCER SELECT switch

Use this to store a desired enhancer effect in memory, and to recall a desired enhancer effect. For further details concerning memory operation.
When the enhancer has been memorized, then the enhancer will be automatically switched ON when this switch is pressed.

㉑ ACOUSTIC SELECT switch

Use this to store desired sound quality settings in memory. Also use it to recall memorized sound quality settings from memory. For further details concerning memory operation.

㉒ SOUND FIELD SELECT switch

Use to store a desired sound field in memory. Also use to recall a desired sound field from memory. For further details concerning memory operation

㉓ SPLIT SCREEN OFF/ON switch

If you turn the ENHANCER OFF/ON switch ON to add the video enhancer effect, and then turn this switch on, the right side of the picture will have the enhancer effect added, and the left side will be without the enhancer effect. A split screen picture can not be output through the VCR REC jacks. A picture with the enhancer ON is output.
The split screen has no effect on S jack video signals.

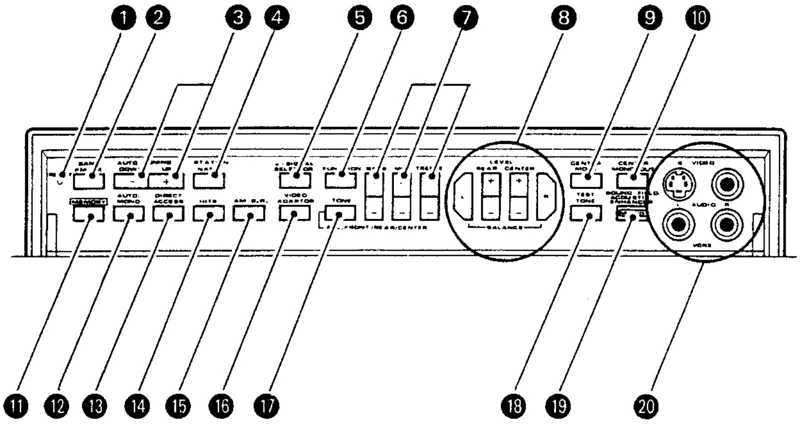
㉔ JOG dial

This lets you control the following six functions.
(1) AM B.R. (AM beat reduction) adjustment.
(2) Tuner frequency (manual tuning)
(3) Selection of letters for station naming.
(4) Video enhancer effect level adjustment.
(5) Surround's delay time selection.
(6) Surround's total effect level adjustment.
You can select which function you want to control with the JOG MODE switch ㉕, but the mode automatically switches when a function changes. For example, if the AM B.R. switch is ON, the JOG MODE automatically switches to enable control of AM B.R.

㉕ JOG MODE switch

Use this to select the mode you want to control with the JOG dial ㉔. The selected mode is indicated by the box in the display section. The lit line under the mode display indicates which mode can be selected.

[INSIDE OF THE HINGED PANEL]



❶ RESET switch

Use this when normal operation becomes impossible because of external influences such as static electricity or lightning, or when operation is impossible even when operation switches are pressed. Press this switch to return to normal operating conditions.
If you press this switch when the power is ON, the unit switches to POWER STANDBY, and the entire contents of the memory are erased.

❷ BAND switch (FM/AM)

Use this to switch between FM and AM frequency band reception.

❸ AUTO TUNING switches (DOWN (–), UP (+))

+ : Performs tuning in ascending frequency order.
– : Performs tuning in descending frequency order.

❹ STATION NAME switch

This switch is used when inputting station names.

❺ V (Video) SIGNAL SELECTOR switch

Press this to switch VIDEO OUT (TO MONITOR TV) and VCR VIDEO OUT in the following sequence: (Audio doesn't change)
The recording selector has priority for VCR video recording.

→VCR 1 → VCR 2 → VCR 3 → VDP → TV → VIDEO → OFF → (back to VCR 1)

▭ Indications light in the display section.
There is no picture when it is OFF.

❻ FUNCTION switch

This changes the INPUT SELECTOR selection in sequence. When the hinged panel door is open, the INPUT SELECTOR switches can not be used, so use this switch instead.

❼ Tone control switches

BASS:
Use to adjust the low-frequency level. Press the + switch to increase low-frequency level, and the – switch to decrease it.
When both sides (+, –) of the BASS control are pressed simultaneously, the base response will be set to the flat (normal) condition.

MID:
Use to adjust the middle-frequency level. Press the + switch to increase middle-frequency level, and the – switch to decrease it.
When both sides (+, –) of the MID control are pressed simultaneously, the middle response will be set to the flat (normal) condition.

TREBLE:
Use to adjust the high-frequency level. Press the + switch to increase low-frequency level, and the – switch to decrease it.
When both sides (+, –) of the TREBLE control are pressed simultaneously, the treble response will be set to the flat (normal) condition.
Adjust TONE CONTROL settings are indicated in the display section (in several seconds).

⑧ BALANCE and LEVEL switches

BALANCE:

Use to adjust the sound volume balance between left and right speakers.

L: Press to decrease the sound on the right side.

R: Press to decrease the sound on the left side.

Press L and R together to bring the volume balance back to standard (Left = Right).

REAR:

Operate only when the surround mode is on.

Use these switches to adjust the sound level between the front and rear speakers.

After adjustment, use the MASTER VOLUME control to adjust the overall sound to a suitable level.

−: Surround rear speaker volume is reduced.

+: Surround rear speaker volume is increased.

Pressing + and − together will restore front and rear to the standard balance setting.

CENTER:

Use these switches to adjust the center speaker sound level to the level of the front speakers.

Operate only when DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC mode is on.

After adjustment, use the MASTER VOLUME control to adjust the overall sound to a suitable level.

− : Lowers the center speaker sound level.

+ : Raises the center speaker sound level.

Pressing − and + at the same time returns you to the standard.

Adjusted BALANCE and LEVEL settings are indicated in the display section (in several seconds).

⑨ CENTER MODE switch

Use this to switch between DOLBY PRO LOGIC SURROUND and the DOLBY 3CH LOGIC center modes (NORMAL, WIDE, PHANTOM). The selected mode is indicated by the CENTER MODE indicators in the display section.

⑩ CENTER MONO OUT switch

When the Surround is off, this switches the output from the center speakers ON/OFF.

If MONO is lit in the CENTER MODE indicators in the display section, front left and right monaural sound is output through the center speakers.

⑪ MEMORY switch

Pressing this switch will result in the memorization of the current broadcast band, reception frequency, and FM AUTO/MONO mode.

This switch is also used to input station names , and custom memory operation.

⑫ AUTO/MONO switch

Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the FM MONO indicator in the display section is lit.

Auto stereo mode:

Normally, leave in this mode for reception. When a stereo broadcast is received, it will be automatically reproduced in stereo.

During stereo broadcast reception, the STEREO indicator in the display section lights.

Monaural mode:

When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

NOTE:

This switch has no effect on reception of AM broadcasts.

⑬ DIRECT ACCESS switch

When this switch is pressed, the STATION CALL switches function as ten-key number switches for direct input of the desired reception frequency.

When frequencies that cannot be received are entered, the entered frequency value flashes, before reception of the previous frequency resumes.

⑭ HITS (Hyper Intelligent Tuning System) switch

- If the HITS switch is pressed at the currently displayed station frequency, the receiver searches up and down the frequency for the next station (The SEARCH indicator in the display section lights at this time.) and stops at the first one it finds.
- If the HITS switch is pressed during STATION NAME input (see page 30), the receiver performs a memory search in order of ascending station number for memorized stations whose names begin with the same letter as the station just input.
- If the HITS switch is pressed during input of numbers for DIRECT ACCESS tuning, the receiver sets the remaining digits which have not yet been input to "0", searches for the corresponding frequencies, and stops on the first station it finds.

NOTE:

- *The system searches for stations within successive 1MHz ranges for FM and 100 kHz ranges for AM. During DIRECT ACCESS tuning, it searches up and down for a station until it reaches the edges of the band. If no receivable station is found within the band range, the receiver returns to the state it was in before the HITS switch was pressed.*
- *If the upper (or lower) frequency limit of the receiver is encountered during HITS operation, the receiver stops searching in that direction but continues to search in the other.*

⑮ AM B.R. (Beat Reduction) switch

This switches AM beat reduction ON/OFF.

You can switch it ON during AM broadcast reception.

Switch it ON and the AM B.R. indicator lights in the display section.

Adjust the level of beat reduction with the JOG dial ㉔. (Turn the JOG dial until you reach the frequency you want to remove).

⑯ VIDEO ADAPTOR switch

Press when using a video adaptor component connected to the rear panel VIDEO ADAPTOR jacks. An indicator on the display section lights up when this switch is set to ON. This has no effect on an S output jack signal.

⑰ TONE switch

Use this to switch between the channels (ALL/FRONT/REAR/CENTER) you want to control with the tone control switches.

⑱ TEST TONE switch

You can use this when surround mode is ON.

[When using DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC]

This switches the TEST TONE passes from the front left → center → front right → rear (L, R) (DOLBY PRO LOGIC) in that order, and can be heard for approximately 2 seconds from each speaker.

[When using other surround modes]

This switches the TEST TONE passes from the front left → center → front right → rear right → rear left in that order, and can be heard for approximately 2 seconds from each speaker.

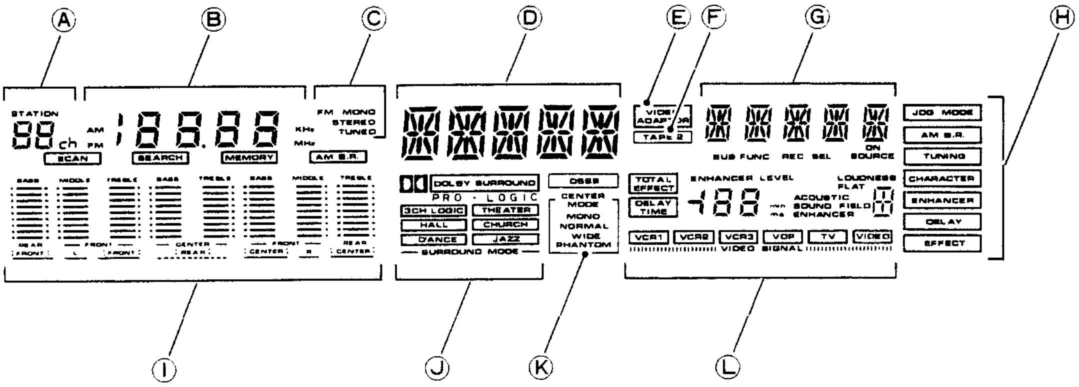
⑲ MEMO switch (SOUND FIELD/ACOUSTIC/ENHANCER)

Use to operate sound field memory, acoustic memory, and enhancer memory.

⑳ VCR 3 INPUT jacks

Video components such as a VCR or TV camera, etc. can be connected here.

[DISPLAY SECTION]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STATION
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PRO · LOGIC
3CH LOGIC
THEATER
HALL
CHURCH
DANCE
JAZZ
SURROUND MODE
CENTER MODE
MONO
NORMAL
WIDE
PHANTOM
VIDEO ADAPTOR
TAPE 2
SUB FUNC
REC SEL
ON
SOURCE
TOTAL EFFECT
ENHANCER LEVEL
LOUDNESS
FLAT
DELAY TIME
ACOUSTIC
SOUND FIELD
ENHANCER
VCR1
VCR2
VCR3
VDP
TV
VIDEO
VIDEO SIGNAL
JOG MODE
AM B.R.
TUNING
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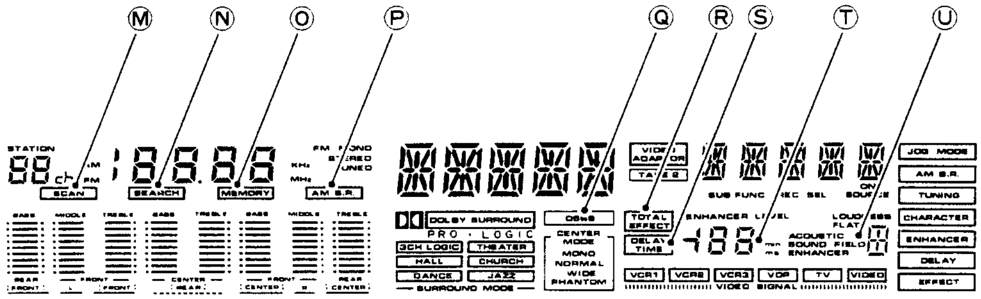


Ⓐ **STATION display**

Shows the channel selected with the STATION CALL switch.

Ⓑ **Frequency display**

Ⓒ **Tuning indicators**

FM MONO: This lights when you select MONO with the AUTO/MONO switch. When this indicator is lit, reception of FM stereo broadcasts is also monaural.

STEREO: When the FM MONO indicator is out (auto stereo mode), this lights when receiving an FM stereo broadcast.

TUNED: Lights when a station is tuned.

Ⓓ **Function & Station name display**

Ⓔ **VIDEO ADAPTOR indicator**

Lights when the VIDEO ADAPTOR switch is in the ON position.

Ⓕ **TAPE 2 indicator**

Lights when the TAPE 2 MONITOR switch is in the ON position.

Ⓖ **SUB FUNC & REC SEL display**

- When you aren't using the REC SELECTOR, "SOURCE" lights, and the function output from the REC OUT jacks is displayed. Switch REC SELECTOR ON and the function selected with the REC SELECTOR switch is displayed.
- When the MULTI ROOM & SOURCE OFF/ON switch is ON, the component selected as the sub function is displayed (SUB FUNC indicator lights).
- CUSTOM MEMORY name is displayed.

Ⓗ **JOG MODE indicators**

The lit mode indicates the function that can be operated with the JOG dial at present.

☐ indicates the present selected mode.

Modes that can be selected are displayed underlined.

Ⓘ **Tone/Level/Balance meters**

Ⓙ **SURROUND MODE indicators**

These display the selected surround mode. When all indicators are out, surround is OFF.

Ⓚ **CENTER MODE indicators**

These display the center mode (NORMAL, WIDE, PHANTOM) during DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC operation. When surround is OFF, they indicate when monaural sound is output from the center channel (MONO).

Ⓛ **VIDEO SIGNAL indicators**

Shows the video components selected.

Ⓜ **SCAN indicator**

Lights during memory scan operation.

Ⓝ **SEARCH indicator**

Lights during HITS operation.

Ⓞ **MEMORY indicator**

Lights during station call switch memory operation.

Ⓟ **AM B.R. indicator**

Lights when the AM B.R. switch is ON.

Ⓠ DSSS indicator

Lights when the DSSS switch is ON.

Ⓡ TOTAL EFFECT indicator

After selecting the THEATER (including when DOLBY PRO LOGIC SURROUND and THEATER are used together), HALL, CHURCH, DANCE, or JAZZ surround mode, this lights during effect level adjustment with the JOG dial.

Ⓢ DELAY TIME indicator

This lights during DOLBY PRO LOGIC SURROUND delay time adjustment.

Ⓣ Effect level/Delay time/Sleep time display

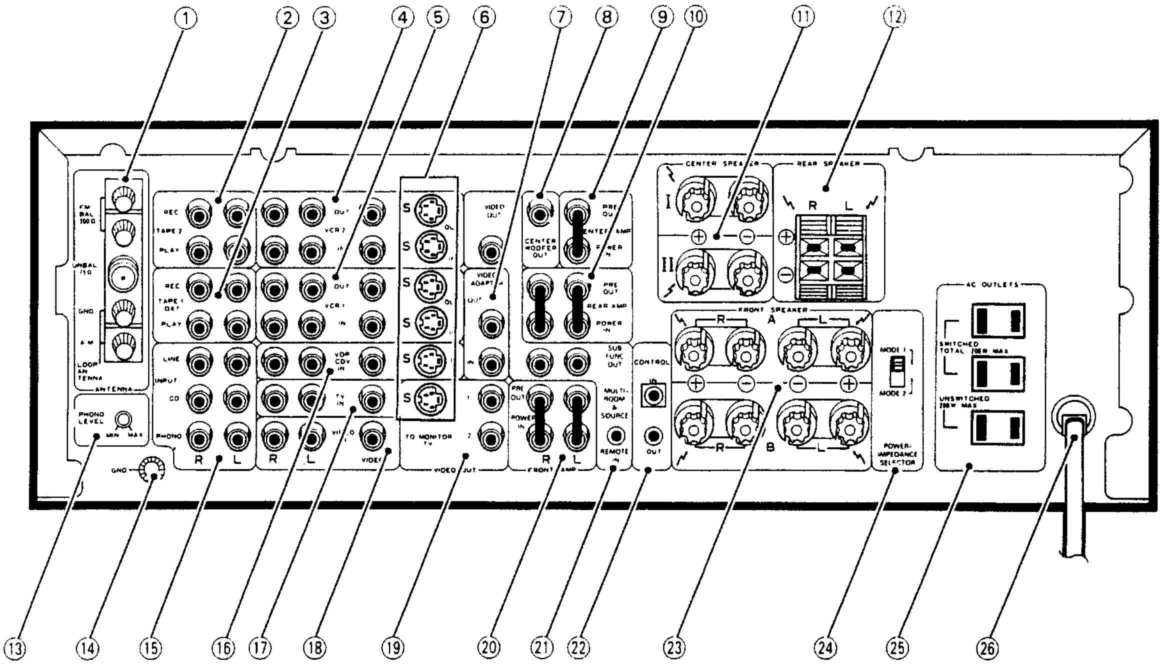
Displays enhancer effect level, surround effect level, surround delay time, and sleep timer.

Ⓤ Acoustic/Sound field/Enhancer memory display

Displays A to E memory letters.

During acoustic memory display, LOUDNESS or FLAT are also displayed.

REAR PANEL FACILITIES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⑪
⑫
FM BAL 300 Ω
UNBAL 75 Ω
GND
AM
LOOP ANTENNA
ANTENNA
PHONO LEVEL
MIN MAX
GND
REC
TAPE 2
PLAY
REC
TAPE 1 DAT
PLAY
LINE
INPUT
CD
PHONO
R
L
OUT
VCR 2
IN
OUT
VCR 1
IN
VDP CDV IN
TV IN
VIDEO
S
VIDEO OUT
VIDEO ADAPTER
OUT
IN
TO MONITOR TV
VIDEO OUT
CENTER WOOFER OUT
PRE OUT
CENTER AMP
POWER IN
PRE OUT
REAR AMP
POWER IN
SUB FUNC OUT
PRE OUT
POWER IN
FRONT AMP
MULTI-ROOM & SOURCE
REMOTE IN
CONTROL
IN
OUT
CENTER SPEAKER
I
II
REAR SPEAKER
FRONT SPEAKER
A
B
MODE 1
MODE 2
POWER/IMPEDANCE SELECTOR
AC OUTLETS
SWITCHED TOTAL 200W MAX
UNSWITCHED 200W MAX
⑬
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① FM/AM ANTENNA terminals

Use these antenna terminals for reception of normal FM and AM broadcasts.

Attach the accessory AM Loop and FM T-type antennas, here.

- For details regarding antenna connection, see the section "HINTS FOR BETTER RECEPTION"

② TAPE 2 jacks

Connect a second cassette deck to these jacks.

Connection for Recording

The tape recording jack (TAPE REC) on the cassette deck should be connected to the REC side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

Connection for Playback

Connect the TAPE PLAY jack on the cassette deck to the PLAY side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

③ TAPE 1/DAT jacks

Connect a DAT (digital audio tape deck) or your primary analog cassette deck to these jacks.

Connection for Recording

The tape recording jack (TAPE REC) on the cassette deck or DAT should be connected to the REC side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

Audio recording from TAPE 2 is not possible.

Connection for Playback

Connect the TAPE PLAY jack on the cassette deck or DAT to the PLAY side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

④ VCR 2 jacks

[VIDEO IN]

Connect to the VCR 2 VIDEO OUTPUT jacks.

[AUDIO IN (L, R)]

Connect to the VCR 2 AUDIO OUTPUT jacks.

[VIDEO OUT]
Connect to the VCR 2 VIDEO INPUT jacks.
[AUDIO OUT (L, R)]
Connect to the VCR 2 AUDIO INPUT jacks.

⑤ VCR 1 jacks

[VIDEO IN]
Connect to the VCR 1 VIDEO OUTPUT jacks.
[AUDIO IN (L, R)]
Connect to the VCR 1 AUDIO OUTPUT jacks.
[VIDEO OUT]
Connect to the VCR 1 VIDEO INPUT jacks.
[AUDIO OUT (L, R)]
Connect to the VCR 1 AUDIO INPUT jacks.

⑥ S (connector) video jacks

When used in conjunction with a VCR, Video disc player (Laserdisc player) or monitor TV equipped with S video jacks, connect to these jacks.

⑦ VIDEO ADAPTOR jacks

Use to connect a video adaptor component such as a video enhancer or color corrector.

⑧ CENTER WOOFER OUT jack

If you want to boost the surround center channel low frequencies, or you want to use the unit in a 3D system, connect to a center woofer power amplifier.
Frequencies above about 200 Hz are cut at 18 dB/oct.

⑨ CENTER AMP jacks

[POWER IN]
When a separate pre-amplifier is used for center speaker and this unit is used as a power amplifier, connect the pre-amplifier to this jack.
[PRE-OUT]
When a separate power amplifier is used to drive the center speaker, connect the power amplifier to this jack.

⑩ REAR AMP jacks

[PRE OUT]
When a separate power amplifier is used to drive the rear speakers, connect the power amplifier to these jacks.
[POWER IN]
When a separate pre-amplifier is used for rear speakers and this unit is used as a power amplifier, connect the pre-amplifier to these jacks.

⑪ CENTER SPEAKERS terminals

Connecting the surround center channel speaker system(s).
You can connect two speakers for dual center, so you can locate speakers on both sides of the TV.
Speaker impedance:
Refer to ㉔ POWER/IMPEDANCE SELECTOR switch on page 26.

NOTE:
Do not allow any of the code's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdown may occur when conductors come into contact with each other.

⑫ REAR SPEAKERS terminals

Connect the rear speakers to these terminals.
Speaker impedance
Connect speaker systems with a nominal impedance of between 8 and 16 Ω.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

⑬ PHONO LEVEL control

Use to adjust turntable input level. If distortion occurs when you are using a high-output cartridge, adjust the volume level until it's the same as another input, such as TUNER.

⑭ GND terminal

Connect the turntable ground lead to this terminal.

⑮ Audio INPUT jacks

PHONO	Connect to turntable.
CD	Connect to compact disc player.
LINE	Connect to the audio output jacks of an additional audio component.

⑯ VDP/CDV jacks (input)

[VIDEO IN]
When watching the video image from a LD player (Compatible Laserdisc player) or a VCR used for playback, connect its VIDEO OUTPUT jack here.
[AUDIO IN (L,R)]
When playing back the audio channel from a LD player (Compatible Laserdisc player) or a VCR for playback, connect its AUDIO OUTPUT jacks here.

⑰ TV jacks (input)

Use these jacks if wish to connect a TV tuner having both video and audio outputs.
[VIDEO IN]
Connect the TV tuner's VIDEO OUTPUT to this jack.
[AUDIO IN (L, R)]
Connect the TV tuner's AUDIO OUTPUT to these jacks.

⑱ VIDEO jacks (input)

Connect the output jacks of video components.
For example, connect a playback-only VCR or a video camera.

⑲ VIDEO OUT TO MONITOR TV jacks (output)

Use to connect a monitor TV or a TV set with video input terminals for watching program materials from a VCR or Video disc player (Laser Disc player) connected to this unit.

⑳ FRONT AMP jacks

[PRE-OUT]
When a separate power amplifier is used to drive the front speakers, connect the power amplifier to these jacks.
[POWER IN]
When a separate pre-amplifier is connected and this unit is used as power amplifier, connect the pre-amplifier to these jacks.

㉑ MULTI-ROOM & SOURCE jacks

Connect here to enjoy a sub function during Multi-Room and Source operation.

[VIDEO OUT]

Connect the monitor TV for use in room B.

[SUB FUNC OUT]

When operating MULTI ROOM & SOURCE with surround in room A, use this jack for sound in room B.

Refer to Room B example 2 for details concerning connections.

[REMOTE IN]

Connect to the separately sold MR-100 Multi-Room remote control unit.

㉒ CONTROL IN, OUT jacks

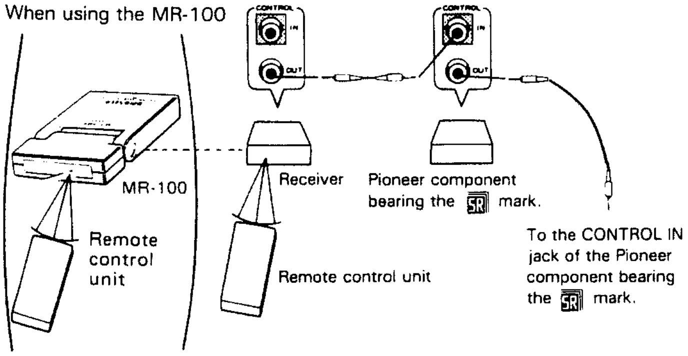
Used for system control with other Pioneer components bearing the SR mark.

IN: For connection from the CONTROL OUT jack of another component (TV, etc.).

OUT: For connection to the CONTROL IN jack of another component.

NOTE:

The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.


When using the MR-100
CONTROL
IN
OUT
CONTROL
IN
OUT
MR-100
Remote control unit
Receiver
Pioneer component bearing the SR mark.
Remote control unit
To the CONTROL IN jack of the Pioneer component bearing the SR mark.

㉓ FRONT SPEAKERS terminals

A: Connect to the first set of speakers.

B: Connect to a second set of speakers or speakers for a Multi-Room Source.

Speaker impedance:

Refer to ㉔ POWER/IMPEDANCE SELECTOR switch.

NOTE:

Do not allow any of the code's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdown may occur when conductors come into contact with each other.

㉔ POWER/IMPEDANCE SELECTOR switch

This selects power and speaker impedance.

[POWER]

MODE 1: Front 130W + 130W (20Hz to 20kHz, 0.005%, 8 Ω)
Center 40W (1kHz, 0.08%, 8 Ω)
Rear speakers are 40 W + 40 W (1kHz, 0.08%, 8 Ω)

MODE 2: Front 70W + 70W (20Hz to 20kHz, 0.005%, 8 Ω)
Center 70 W (20Hz to 20kHz, 0.05 % 8 Ω)
Rear speakers are 50W + 50W (1kHz, 0.08%, 8 Ω)

[SPEAKERS IMPEDANCE]

MODE 1:

	FRONT: A		FRONT: A + B	
FRONT	8 ~ 16 Ω		16 Ω	
REAR	8 ~ 16 Ω		8 ~ 16 Ω	
CENTER	I	I + II	I	I + II
	8 ~ 16 Ω	16 Ω	8 ~ 16 Ω	16 Ω

MODE 2:

- If using 4 Ω or more for Front

	FRONT: A		FRONT: A + B	
FRONT	4 ~ 16 Ω		8 ~ 16 Ω	
REAR	8 ~ 16 Ω		8 ~ 16 Ω	
CENTER	I	I + II	I	I + II
	8 ~ 16 Ω	16 Ω	8 ~ 16 Ω	16 Ω

- If using 4 Ω or more for Center

	FRONT: A		FRONT: A + B	
FRONT	8 ~ 16 Ω		16 Ω	
REAR	8 ~ 16 Ω		8 ~ 16 Ω	
CENTER	I	I + II	I	I + II
	4 ~ 16 Ω	8 ~ 16Ω	4 ~ 16 Ω	8 ~ 16 Ω

NOTE:

Turn off the receiver's power before changing the switch setting.

㉕ AC OUTLETS

[U.S. and Canadian models]

SWITCHED TOTAL 200 W MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 200 W.

UNSWITCHED 200 W MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 200 W.

[Multi-voltage model]

SWITCHED TOTAL 100 W MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.

UNSWITCHED 100 W MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W.

NOTE:

- *This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.*
- *Do not connect appliances with high power consumption such as heaters, irons, or television sets to these AC OUTLETS in order to avoid overheating and fire risk.*
  This can cause the receiver to malfunction.

CAUTION:
DO NOT CONNECT MONITOR OR TV SET.

㉖ AC Power cord

Connect to AC wall socket.

10. SPECIFICATIONS

Amplifier section

OUTPUT POWER (POWER AMP IN)

MODE A

(Front)

Continuous average power output of 130 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.005 % total harmonic distortion.**

Rear, center .... 40 W + 40 W, 40 W (1 kHz, 0.08%, 8Ω)

MODE B

Front, center ... 70 W + 70 W, 70 W (20 Hz to 20 kHz, 0.005%, 8Ω)
Rear .... 50 W + 50 W (1 kHz, 0.08%, 8Ω)
Dynamic power (2 Ω/4 Ω) .... 280 W/260 W

Audio section

Damping Factor
  1 kHz, 8 Ω 100
Input (Sensitivity/Impedance)
  PHONO MM .... 2.5 mV/47 kΩ
  CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 .... 150 mV/47 kΩ
  POWER AMP IN .... 1 V/47 kΩ
Phono Overload Level (T.H.D. 0.08 %, 1000 Hz)
  PHONO MM .... 150 mV
Output (Level/Impedance)
  TAPE 1/DAT REC, TAPE 2 REC, VCR 1 OUT, VCR 2 OUT .... 150 mV/2.2 kΩ
  PRE AMP OUT .... 1 V/220 Ω
Frequency Response
  PHONO MM .... 20 Hz to 20,000 Hz ± 0.3 dB
  CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 .... 5 Hz to 100,000 Hz ± 3 dB
Tone Control
  BASS .... ± 8 dB (100 Hz)
  MIDDLE .... ± 8 dB (1 kHz)
  TREBLE .... ± 8 dB (10 kHz)
Loudness Contour .... + 6 dB (100 Hz)
  + 3 dB (10 kHz)
Signal-to-Noise Ratio (IHF, short circuited, A network)
  PHONO MM .... 82 dB
  CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 .... 98 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
  PHONO MM .... 77 dB
  CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 .... 80 dB

VIDEO Section

Input (Sensitivity/Impedance)
  VCR 1, VCR 2, VCR 3, VDP/CDV, TV, VIDEO, ADAPTOR .... 1 Vp-p/75 Ω
Output (Level/Impedance)
  VCR 1, VCR 2, ADAPTOR, MONITOR .... 1 Vp-p/75 Ω
Frequency Responce
  VCR 1, VCR 2, VCR 3, VDP/CDV, TV, VIDEO, ADAPTOR→MONITOR .... 5 Hz – 10 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio .... 55 dB
Cross Talk .... 55 dB (3.58 MHz)
Enhancer .... ± 3 dB (2 MHz)

[S terminals]

Input (Sensitivity/impedance)
  VCR 1, VCR 2, VDP/CDV .... Luminance signal: 1 Vp-p/75 Ω
  Color difference signal: 0.286 Vp-p/75 Ω
Output (Level/impedance)
  VCR 1, VCR 2, TO MONITOR TV. Luminance signal: 1 Vp-p/75 Ω
  Color difference signal: 0.286 Vp-p/75 Ω
Frequency response
  Luminance signal .... 5 Hz to 10 MHz, $^{+0}_{-3}$ dB
Signal-to-Noise Ratio
  Luminance signal .... 55 dB
Cross talk .... 55 dB (3.58 MHz)

Surround section

Input (Sensitivity/Impedance)
  REAR POWER AMP IN .... 1 V/47 kΩ
  CENTER POWER AMP IN .... 1 V/47 kΩ
Output (Level/Impedance)
  REAR PRE AMP OUT .... 1 V/470 Ω
  CENTER PRE AMP OUT .... 1 V/470 Ω

FM Tuner Section

Frequency Range .... 87.5 MHz to 108 MHz
Usable Sensitivity .... Mono; 10.8 dBf, IHF (0.95 μV/75 Ω)
50 dB Quieting Sensitivity .... Mono; 15.3 dBf, (1.6 μV/75 Ω)
  Stereo; 37.0 dBf, (19.5 μV/75 Ω)
Signal-to-Noise Ratio .... Mono; 80 dB (at 65 dBf)
  Stereo; 76 dB (at 85 dBf)
Distortion .... Mono; 0.08 % (100 Hz)
  0.08 % (1 kHz)
  0.2 % (6 kHz)
  Stereo; 0.2 % (100 Hz)
  0.15 % (1 kHz)
  0.3 % (6 kHz)
Capture Ratio .... 1.0 dB
Alternate Channel Selectivity .... 65 dB (400 kHz)
Stereo Separation .... 50 dB (1 kHz)
Frequency Response .... 30 Hz to 15 kHz $^{+0.5}_{-2.0}$ dB
Image Interference Ratio .... 50 dB
IF Interference Ratio .... 80 dB
AM Suppression Ratio .... 55 dB
Spurious Interference Ratio .... 70 dB
Antenna Input .... 300 Ω balanced
  75 Ω unbalanced

AM Tuner Section

Frequency range .... When 10 kHz step: 530 kHz – 1,700 kHz
  When 9 kHz step: 531 kHz – 1,602 kHz
Sensitivity (IHF, Loop antenna) .... 300 μV/m
Selectivity .... 30 dB
Signal-to-Noise Ratio .... 50 dB
Image Interference Ratio .... 40 dB
Antenna .... Loop antenna

Miscellaneous

Power requirements	
U.S., Canadian models	AC 120V, 60 Hz
Other destination models	AC 110/120–127/220/240V (switchable), 50/60 Hz
Power consumption	
U.S., Canadian models	680 W, 840 VA
Other destination models	1100 W
In stand by condition	3 W
AC Outlets	
U.S. and Canadian models	SWITCHED x 2: TOTAL 200 W MAX UNSWITCHED x 1: 200 W MAX
Other destination model	SWITCHED x 2: TOTAL 100 W MAX UNSWITCHED x 1: TOTAL 100 W MAX
Dimensions	420 (W) x 162 (H) x 457 (D) mm 16-9/16 (W) x 6-3/8 (H) x 18 (D) in
Weight (without package)	15.0 kg (33 lb)

Furnished Parts

FM T-type antenna	1
AM Loop antenna	1
Dry cell battery (LR03/AM-4)	4
Remote control unit	1
Operating Instructions	1
Templates added	2

NOTE:
Specifications and the design subject to possible modifications without notice due to improvements.

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*

** *Measured by Audio Spectrum Analyzer.*

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